

Enhancing Learning in the Middle Years of Schooling

An examination of key elements of effective structures and approaches

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What are the essential elements of programs that have been developed in Australia and internationally to enhance learning in the middle years of schooling?

Much of this work has been developed and implemented in schools concerned with improving learning in the middle years of schooling (Years 5-9 or age 10-11 through to age 14-15).

The emerging elements that are designed to enhance learning in the middle years of schooling are listed below:

- **learning to learn, learning to think**
- **collaborative team approach – teachers and students**
- **stronger focus on relationships between students and teachers; a focus on developing community and 'human sized' groups**
- **cross-curricular, interdisciplinary & integrated learning approaches**
- **authentic assessment; real life contexts; contemporary approaches**
eg using ICT to enhance learning

What are the principles of effective learning that underpin these developments?

What are the implications for implementation?

On the following pages each element is elaborated in terms of:

- features
- underlying principles
- implications in terms of development and implementation
- positives and negatives
- specific examples from other schools

The discussion on implications for development and implementation in the next section is generic to schools but it is not intended to catch all the specific implications that may apply in an individual school.

What are the principles of effective learning that underpin these developments?

Features & Underlying Principles	Implications for development & implementation	Potential Positives	Potential Negatives	Specific Examples
<p>Learning to learn, learning to think</p> <p>Research on learning and intelligence over the past fifteen to twenty years indicate that all aspects of intelligence can be enhanced. 'Learning to Learn' approaches & programs include:</p> <ul style="list-style-type: none"> - developing self awareness and self esteem as a learner - developing more effective learning strategies, thinking skills, management & organisational skills, cooperative learning skills - developing a metacognitive approach - developing skills for greater self direction and self evaluation - All the indications are that the most important capacities in the emerging knowledge era relate to being an effective learner, communicator, problem solver and to be able to work in teams effectively. 	<ul style="list-style-type: none"> • for effective implementation a Learning to Learn program needs to be developed. There are many resources available to draw on but no 'off the shelf' programs that would be suitable • a team approach in implementation has greater impact than when an individual teacher implements the program. In a team approach one teacher teaches a strategy or skill explicitly and the other teachers in the team consolidate and embed the strategies in other subjects 	<p>Lays foundation for effective learning and throughout Senior School.</p> <p>Has the potential to help build an open & supportive learning culture through an understanding of each others' strengths and weaknesses as learners</p> <p>Consistency of approach, consolidation of skills and transfer of skills.</p> <p>Less dependence on teacher</p>	<p>Students can use self awareness as an excuse.</p> <p>Can detract from time for other learning if not integrated into program well.</p> <p>Takes time for teachers involved to share</p> <p>Can become narrowing rather than liberating if poorly taught</p>	<p>Some examples:</p> <p>Scotch College, Melbourne (Implemented through Year 7 & 8 teams – it's an integral part of their teams approach)</p> <p>Wesley College, Melbourne (Year 7 & Year 9 programs) For example, the Elsternwick campus of Wesley has <i>Independent Learning Program</i> time built into each cycle and teachers work with a small group of students on learning strategies</p> <p>PLC Perth (Year 8)</p> <p>Wesley College, Perth (Year 10)</p> <p>Glen Waverley Secondary College – ongoing research into outcomes of the program shows a significant increase in positive attitude to school, to learning and to selves as learners.</p> <p>Marian College, Goulburn developed a one term unit for all Year 7 students titled '<i>Understanding How We Learn.</i>' It was intended that other teachers of Year 7 consolidate the skill development by taking responsibility for using the strategies and approaches in other subjects. The impact of the program was never as strong as in schools where the approach was introduced through a team approach.</p>

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<p>Collaborative team approach</p> <p>The world outside of school increasingly operates in a collaborative team approach. This is partly due to the increasing complexity of issues and to the fact that most new knowledge is being created at the interface between disciplines.</p> <ul style="list-style-type: none"> • teachers working together as a team for one class models a collaborative approach • when multiple viewpoints are brought to bear on an issue there is potential for synergy. • consistency of approach by a team of teachers with a class of students creates a more concentrated focus on the learning and pastoral needs of the students. • there is greater opportunity to develop and consolidate learning and thinking strategies, to facilitate transfer of skills, strategies and concepts across curriculum areas and to reduce any unnecessary overlap in curriculum areas. <p>When students work in a collaborative team there is greater opportunity to develop a supportive learning culture in which students help each other learn.</p>	<p>A teams approach requires opportunities & time to meet. In some schools the concept of teams has been introduced but no time, nor any real opportunity to meet have been created meaning that the team is a team in name only.</p> <p>Ideally teachers working in a team are timetabled to be free at the same time. Due to the complexities of a secondary school timetable, and time as a limited resource this is often very difficult to achieve. Other approaches to finding time to meet are varied and include providing release for a half day or day-long meetings of teams to develop particular programs and approaches.</p> <p>The smaller the team the greater the chance of finding suitable times to meet.</p> <p>The more often a particular grouping of students is together as one class the greater the sense of team that can develop.</p> <p>Schools in which a lot of informal conversation between teachers occurs naturally find it easier to implement a teams approach eg small schools, schools that provide lunch, morning tea etc, schools that have a common & central working staff room for all staff.</p> <p>When schools first adopt a teams approach the first developments seem to focus on teachers getting used to working in a team and their focus with students initially tends to revolve around pastoral and management issues. The longer the teams approach is in existence the more the focus moves towards consolidation of learning skills and strategies and developing cross-curricular approaches.</p> <p>When a school simultaneously introduces a “learning to learn” program with a</p>	<ul style="list-style-type: none"> • ‘fewer students slip through the net’ • staff energised by professional collaboration focussed on students’ learning • opportunities for cross - curricular consolidation emerge naturally in the team • a more positive, supportive and open learning culture for students 	<ul style="list-style-type: none"> • can be frustrating if time to meet is not structured in • the team is dysfunctional (can apply to teams of teachers and teams of students) <ul style="list-style-type: none"> - not all participate - the load is not shared - some aren’t team players - inconsistency of approach and /or philosophy - • keeping students together in one class as much as possible can restrict flexibility with regard to groupings of students • the larger the team the less well they appear to work 	<p>There are numerous examples of schools working in a collaborative teams approach in Australia and internationally. The particular models are different from school to school.</p> <p>The simplest model at Year 7 level involves teachers who are teaching the same class of students meeting regularly to discuss the learning and pastoral needs of the students they teach in common.</p> <p>More complex team models tend to develop in response to the particular emphasis different schools place on other elements.</p> <p>For example, <i>Glen Waverley Secondary College</i> has a strong focus on learning to learn and learning to think and teams have formed around the level of interest of teachers in implementing these approaches and cross curricular approaches. Some of their teams are quite large for a particular class and do not depend on a teacher teaching more than one subject to one class.</p> <p><i>Scotch College, Melbourne</i> has a multi-faceted approach. Their teams consist of at least two teachers who teach two subjects to the particular class as well as other teachers of that class. They have a strong learning to learn focus, a strong pastoral focus and a cross-curricular and integrated learning approach. Part of the staff allocation is team meeting time and they are timetabled to meet once per cycle.</p> <p>Developments at <i>The Scots College, Sydney</i> have emerged from an emphasis on an integrated approach to learning. Their teams in Year 7 & 8 consist of several teachers. Each teacher in the team teaches one Year 7 class English, Geography and History. Within the team there is an English specialist, a Geography specialist and a History specialist who meet regularly and design the program collaboratively.</p> <p><i>There are numerous other examples</i></p>

	teams approach the phases of the developmental process are speeded up.			<i>that have been designed specifically to meet the needs of particular schools.</i>
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<p>Stronger focus on relationships between students and teachers; a focus on developing community and 'human sized' groups</p> <p>Much of the research on learning indicates that a learning environment in which a learner feels acknowledged and secure combined with experiencing care and high expectations has the most significant impact on learning.</p> <p>Large groups of people, and working with a large number of people, work against quality relationships.</p> <p>Just as it has been shown that 'greater time on task' enhances learning, greater teacher time devoted to a smaller number of students has a similar impact.</p>	<p>In a traditional secondary school environment teachers teach a large number of students and students often work with a very large number of teachers – in some schools up to fifteen teachers for some Year 7 students.</p> <p>Depending on the subject area being taught, and curriculum organisation of the school, the worst case scenario occurs when some teachers teach up to 250 students in a cycle in short and infrequent time slots. Many schools have responded to this issue by developing semester long courses for the subjects that have a smaller overall slice of the 'time pie' in schools.</p> <p>In addition to this approach other schools have worked to develop models in which one teacher teaches a class two or more subjects.</p> <p>It is critical that such an approach is based on volunteer staff – staff who are competent and feel positive about teaching two or more subjects. Another factor that emerges as an extremely significant factor in enhancing learning is the passion of the teacher for the subject.</p>	<p>Teaching one class two or more subjects</p> <ul style="list-style-type: none"> • greater time with students can result in stronger relationships • the students feel a greater sense of being known by the teacher • teachers claim they are more able to follow up on the learning needs of students and that they know the students better • students work with fewer teachers but still have a variety of teachers – usually around 6-8 teachers. Schools who have focussed on smoothing the transition for Primary to Year 7 often take this approach • it is easier to implement a collaborative team approach as there is a smaller number of teachers teaching the one class and thus to form the team • cross –curricular and learning to learn approaches can be facilitated by the one teacher having greater opportunity to focus on implementation 	<ul style="list-style-type: none"> • clashes between a teacher and a particular student(s) can occur and such a problem can thus be magnified • students sometimes claim that they like the variety of having a different teachers for each subject. When this response is researched more deeply it often emerges that students feel that they can get away with things more – the focus of attention is not as concentrated. • when this practice has become an established practice in some schools, teaching in two areas can be imposed on staff entering the school – 'teacher passion' and teacher expertise can be ignored • when this approach is implemented on its own there is little gain in terms of students learning • when teachers teach in more than one subject area it makes it more difficult to arrange department meetings • the curriculum organisation of the school and the other responsibilities of some teachers may make it more 	<p>Many of the schools mentioned on the last couple of pages build this element in as an integral part of their Year 7 and teams structures.</p> <p>There are schools that focussed on this element in isolation several years ago but few continued with the practice when this was the way it was implemented.</p> <p>When schools have used this approach as one facet of their structures to facilitate 'learning to learn', cross-curricular consolidation and integrated learning AND when they have paid attention to teacher expertise and teacher passion it has had a significant positive effect.</p> <p>Eg Glen Waverley Secondary College, Scotch College, The Scots College, Emmaus Cathloic College, Parkdale Secondary College etc . – the list is long.</p>

		<ul style="list-style-type: none"> • teachers have fewer students to get to know and fewer reports to write 	difficult to combine two or more Year 7 classes with senior classes in some teacher's allocations	
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<p>Cross-curricular & integrated learning approaches</p> <p>Many teachers in secondary schools are concerned by:</p> <ul style="list-style-type: none"> • the lack of transfer of skills and concepts from one context to another • a compartmentalising of knowledge illustrated by statements from students such as "We did this in Geography!" or "This is not Maths!" <p>Learning in a meaningful way naturally involves integrative processes in the mind. Powerful learning integrates experience, emotions, imagination, information and application. Automation and mastery of processes and skills requires rehearsal and consolidation.</p> <p>Purposeful learning is more likely to be meaningful. Increasingly, in the world beyond school, people are working in an interdisciplinary way and this is starting to have an impact on the way educational institutions are structured.</p> <p>For example the Science faculty at Flinders University in South Australia have been exploring restructuring from working in</p>	<ul style="list-style-type: none"> • teachers of different subjects need time to discuss natural connections between subjects and to determine ways in which concepts, skills and processes learned in one subject can be extended, consolidated or enriched in another • time is needed for teachers to design interdisciplinary approaches • any approach to integrating the curriculum should emerge from a focus on connectedness in learning, from a focus on integrating the learning the curriculum will be integrated where it is appropriate to do so • it is critical that the integrity of the disciplines be preserved – the label 'interdisciplinary' approach is more suitable than integrated curriculum • timetabling approaches that block together subjects likely to be working in an interdisciplinary fashion allows greater flexibility in the use of time 	<ul style="list-style-type: none"> • consolidation of concepts, skills or processes learned • greater connectedness between what is learnt in one subject with learning in another • more meaningful learning • can save time; more effective use of teaching and learning time • can reduce the number of assignments and assessment tasks for students 	<ul style="list-style-type: none"> • some attempts at integration have been forced and result in teachers attempting to work out how they can teach "Water" for three weeks • the integrity of the disciplines can be destroyed if careful thought is not given to this in design • if overdone, can result in students getting an 'overdose' on one theme 	<p>There are numerous examples from numerous schools. Here are a few specific examples of these approaches that I have gleaned from various schools in the past couple of months:</p> <p>In English students learnt how to write reports and as a basis for report writing in Science. The students completed one assessment task that was assessed by both the teacher of English and the Science teacher.</p> <p><i>At Dromana Secondary College</i> students researched endangered species on the Mornington Peninsula. Individuals or groups of students chose one of these species to research further in terms of habitat needed to protect the species. They then designed and made nesting boxes etc and placed these in the local environment. They are monitoring the numbers of species in the area. The students kept a journal throughout the project, presented a folio including design drawings etc and then they developed a multimedia presentation of their project and presented it at the local Gould League meetings.</p> <p>Teachers of Science, Social Science, Design & Technology, and English worked together to design, teach and assess the unit.</p> <p>Flinders University & the SA Department of Education are working together to set up the Australian Science and Mathematics School on Flinders Uni campus in which it is expected that students will work on interdisciplinary projects in connection</p>

Departments of Chemistry, Biological Sciences etc to Biotechnology, Information Technology and Nanotechnology.				with Scientists at the University.
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<p>Authentic assessment</p> <p>Learner driven learning is more likely to be effective and meaningful. More powerful learning occurs when it is the learner's purpose not the teacher's purpose that drives learning and the assessment of learning.</p> <p>The term authentic assessment is used in different places to mean different things. Key features of approaches to authentic assessment are:</p> <ul style="list-style-type: none"> • assessment as demonstration and celebration of what has been learned • assessment tasks involving demonstration of the relevance and power of the learning in real life situations eg the Dromana Secondary College project described on the previous page 	<ul style="list-style-type: none"> • requires a new way of looking at and thinking about what the students are learning and how what they are learning can be demonstrated in relation to a real life situation or context 	<ul style="list-style-type: none"> • more meaningful learning, more purposeful students • learning driven rather than assessment driven learning • greater ownership of the learning by the learner which heightens intrinsic motivation 	<p>More of a difficulty than a negative. . .</p> <p>If assessment is to demonstrate the relevance and power of learning in relation to real life contexts, it can create greater demand for off campus activity</p>	<p>The <i>New Basics and Rich Tasks</i> approach being trialed in Queensland involves students engaging in learning through 'rich tasks' that are problem-based and have relevance and power in everyday life.</p> <p>Examples of Rich Tasks currently being trialed in QLD:</p> <p>RICH TASK – No 2 Product design and display Students will show that they are able to identify and make a product that could add to the quality of life of individuals or groups. They design, or improve the design of, a product and use mathematical skills and tools to construct a full sized version or scale model of it. They gather information about the suitability of materials for larger scale manufacture of the product. They develop a marketing plan for the product and prepare their work for public display.</p> <p>RICH TASK – No 1 A health issue – explore and take action Students will show that they are able to identify a health issue of local concern and participate in developing an initiative within school communities to address the issue.</p> <p>They identify possible contributing factors, including policies, rules, social attitudes and behaviours and communicate with target groups about potential strategies for intervention. They prepare a plan for resolving the issue and negotiate with target groups so that action takes place.</p> <p>The Dromana Secondary College example from the last page is an example as is the CREST project and Science Conference conducted at CGS.</p>

References:

A National Middle Schooling Project has been ongoing in Australia since the middle nineties. A couple of references that summarise some of the work from this project are:

Barratt, R. 1998 *Shaping Middle Schooling in Australia*, A Report of the National Middle Schooling Project, ACSA

Cumming, J. 1998 *Extending Reform in the Middle Years of Schooling Challenges and Responses*, ACSA

Currently, under the banner of MYRAD – Middle Years Research and Development, research is being carried out by schools in determining the outcomes from learning to learn, learning to think programs as well as other approaches that have developed through attempts to improve learning in the middle years of schooling.