Personalising Education:

from research to policy and practice

Paper No. 11
September 2007

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Foreword

Personalisation in education has been discussed in research and policy papers for about ten years. Personalised learning, as a concept, was used first in the United States and was subsequently expanded and deepened through work in the United Kingdom as it became embedded in a wider argument for the reform of all public services. This reform aimed to create services that responded more directly to the diverse needs of individuals rather than imposing uniform solutions on all people.

Descriptions and definitions of personalising education have emerged at national and international levels. As a key driver of education reform, personalising education has the following common themes:

- Learners are central
- Information and communications technology (ICT) is a key enabler
- Lifelong learning
- Communities of collaboration.

In Victoria, elements of these themes are outlined in various government reports and school policies and programs. For example, many schools are working on ways to tailor education to the individual and are providing innovative ICT-rich learning environments. For some schools this includes introducing student-led interviews as an assessment and reporting initiative. At the system level, the Next Practice: Design Teams Pilot Project identifies key elements of personalised learning and teams of teachers, researchers and other specialists are working collaboratively to share emerging research, and the related teaching and learning practice.

Personalised learning is still in its embryonic stages so as yet there is little evidence of its overall success. Nevertheless, there is substantial evidence that many of the components of personalised learning approaches have been successful in a variety of contexts in Australia and around the world.

I trust that you will find this report a useful resource for generating discussion in your school on personalising education.

Dahle Suggett
Deputy Secretary
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Executive summary

This report, *Personalising education: from research to policy and practice,* brings together a significant and comprehensive range of local and international research, particularly from the United States, United Kingdom, and Australia. Four broad areas common to the concept of personalising education have emerged from a synthesis of this body of work. These are presented in the overview section of the report and comprise: student-centred learning, ICT as a key enabler, lifelong learning and communities of collaboration.

Following the overview of the research, the report then explores the emergence of personalisation from Australian and international perspectives. It includes current Victorian, national and international policy statements together with case studies that demonstrate how approaches to personalising education are being translated into practice.

The concept of personalised learning first appeared in North American literature in the early 1980s although not at a whole-of-government level. In the United Kingdom however, the concept of 'customised personalised services', was introduced in the late 1990s. In 2004, the UK Government officially endorsed personalised learning within an education policy framework.

In Australia in 1999, the *Adelaide Declaration on National Goals for Schooling in the Twenty-First Century* referred to key elements of the personalised learning agenda including lifelong learning, strengthening schools as learning communities, and the use of new technologies, particularly information and communication technologies.

In 2007 the Australian report, *The future of schooling in Australia,* identified high-quality teaching, personalised learning and school engagement with community as essential to schooling.

Because personalised learning is still in its embryonic stages there is little evidence of its overall success. Nevertheless, there is substantial evidence that many of the components of personalised learning approaches have been successful in a variety of contexts around the world.

An overview of personalisation in education

Personalisation in education has been discussed in research and policy papers for approximately ten years. Personalised learning, as a concept, first appeared in the United States and was subsequently expanded and deepened through work in the United Kingdom as it became embedded in a wider argument for the reform of all public services. This reform aimed to create services that responded more directly to the diverse needs of individuals rather than imposing uniform solutions on all people.

A number of descriptions and definitions of personalising education have emerged at national and international levels. As a key driver of education reform, personalising education has the following common themes.

Learners are central

Personalising education involves:

- a highly-structured approach that places the needs, interests and learning styles of students at the centre
- engaged learners who are informed and empowered through student voice and choice
- assessment that is related to meaningful tasks and includes assessment for and from students
- a focus on improving student outcomes for all and a commitment to reducing the achievement gap.

Information and communications technology (ICT)

ICT is a key enabler that:

- allows each pupil greater diversity for learning
- enhances interactivity between individual students and individual teachers
- provides a space for personalised, flexible learning beyond the classroom walls
- allows students to live locally whilst learning globally - through the use of external resources accessed via the world wide web.

Lifelong learning

Personalising education includes a commitment to:

- lifelong learning and the provision of flexible learning environments
- a range of educational pathways to meet the needs of all students.

Communities of collaboration

A school embracing the concept of personalising education will:

- promote a 'community of learning' approach and cultivate strong relationships between adults and students
- develop and promote the notion of networks rather than existing in isolation
- have strong links with the home, community, local institutions, business and services.

Differing views of personalising education have emerged. A shallow view equates it with no more than providing individual choice between predetermined options. A more meaningful view focuses on developing organisational and teaching strategies to ensure every child's education is tailored to their needs so as to support higher levels of student engagement and attainment.

The report, *Schooling for tomorrow: personalising education* (OECD 2006) further clarifies personalised learning:

> Personalised learning is not a return to child-centred theories; it is not about separating pupils to learn on their own; it is not the abandonment of a national curriculum; and it is not a licence to let pupils coast at their own preferred pace of learning. The rationale for personalised learning is clear: it is to raise standards by focusing teaching and learning on the aptitudes and interests of pupils. Personalised learning is the way in which our best schools tailor education to ensure that every pupil achieves the highest standard possible.

A personalised approach to learning is gaining traction in Australia. At a 2005 seminar held in Sydney to explore personalised learning, Tom Bentley, former Director of the UK-based organisation, Demos, indicated that practical attempts to personalise education and children's services were at a relatively early stage in the United Kingdom. Despite this, he said, change was occurring across different levels of government, and practical attempts to personalise education were also bringing about cultural change and workplace reform in relation to the use of new technologies and institutions.

The reason for the change was driven by a recognition that the current approaches to schooling in the UK 'simply do not provide the right foundation for the twenty-first century needs of young people, or the demands and accountabilities placed on them by the rest of society' (Bentley 2005). Further, Bentley stated:

> Personalisation is therefore a strategy both for drawing on wider resources and influences for learning beyond the formal organisation of schooling, and for making more of the existing organisational ingredients by creating new flexibilities in tandem with new demands. The difference is that the demands are being fuelled from within – by teachers and students – as much as they are from without, by parents or policy-makers acting through external choices and channels.

A recent report, *The future of schooling in Australia* (Council for the Australian Federation 2007), identifies key challenges facing schooling in Australia. The report lists essential components of an equitable education system as high-quality teaching, personalised learning and the development of school community partnerships. Further, the report recommends that government and schooling authorities should have 'the capacity to tailor an education for the individual child' and acknowledges the potential of personalisation to contribute to improved retention and attainment rates.

From a Victorian perspective, elements of personalised learning are evident in various reports. The report titled: *A fairer Victoria: creating opportunity and addressing disadvantage* (Department of Premier and Cabinet 2005a) articulates the Government's long-term action plan. It states:

> We will implement new ways of working directly with communities, giving groups and communities a greater say in determining their futures. We will also streamline the delivery of services across different levels and functions of government, and work together with business and the community sectors to improve local outcomes.

From an education perspective the report on the progress of the plan, *A fairer Victoria: progress and next steps*, acknowledges the importance of meeting the needs and interests of all learners:

> We recognise the diversity of students attending Victorian government schools and cater for every student to allow them to achieve their full potential.

> Young Victorians are telling us they want more information and involvement in decisions affecting them. We also know that young people come from different backgrounds and circumstances and do not share equally in opportunities and achievements…We know that individual support at the right time can have a real impact on the lives of young people (Department of Premier and Cabinet 2006).

Both locally and internationally, personalisation in education is still in its embryonic stages with little evidence of its overall success. Nevertheless, there is substantial evidence that many of the components of personalised learning approaches have been successful in a variety of contexts around the world.

As Fullan (1993) observed long before personalised learning made its way onto the global political stage:

> What we don't know is how to achieve these goals for *all* students locally, let alone nationally and internationally. The reason that this is difficult is that it requires a prodigious and mobilised effort and collaboration among a number of constituencies – parents and community, business and industry (labour and management), government and other social agencies, and the education system. The education system cannot do it alone, but it must help break the cycle of disjuncture by helping to lead the way in its own right and through alliances (p. 136).

This report seeks to improve knowledge and understanding by exploring the concept of personalised learning as it has been identified in local and international research.

PART 1: Personalised learning as an emerging area of interest

The concept of personalised learning has developed through various national and international contexts which have in turn, affected the way personalised learning is currently viewed and described. This section traces these developments.

North America

In 1983, a report from the United States, *A nation at risk*, identified the growing achievement gap between advantaged and disadvantaged students and prompted an 'educational awakening' amongst American educators and policy-makers. According to the then US Secretary of Education, Roderick Paige (2001), this development triggered a range of educational reforms.

One educational reform was the publication of a report titled *Breaking ranks* (National Association of Secondary Schools Principals 1999). This report incorporated an early use of the term 'personalise' in relationship to education. The six themes which formed the basis of recommendations in the report were:

1. personalisation - smaller schools using a variety of instructional strategies accommodating individual learning styles
2. coherency - schools concentrating on student learning essentials that could be applied to the world outside school
3. time - schools operating all year round
4. technology - long-range plans for the use of technology and personnel being developed to assist teaching staff
5. professional development - teachers developing their own Personal Learning Plans
6. leadership - principals working with members of school communities in the exercise of instructional leadership.

Relationships between the different aspects were stressed and the report anticipated that if all the recommendations were fully implemented:

> they would create dramatic changes that would comprehensively benefit students through improved learning and better preparation for post-secondary study and citizenship (NASSP 1999).

The National Association of Secondary Schools Principals also stressed that:

> The complex problems of American secondary education will not be addressed with a few quick fixes. Each of the eighty-one recommendations of *Breaking ranks* is a link in a chain of reasonable and effective practice that can improve education for all of our children (NASSP 1999).

In 1999, Littky and Allen made the following point in terms of what is needed to support personalised approaches:

> Truly personalised learning requires reorganising schools to start with the student, not the subject matter. A school that takes personalised education to its full potential is less concerned with what knowledge is acquired and more interested in how knowledge is used. The priority at such a school is to know students and their families well enough to ensure that every teaming experience excites the students to learn more. The school that looks at one student at a time truly prepares students for lifelong learning (Littky & Allen 1999).

In 2000, the influential Carnegie Corporation of New York awarded grants to a number of urban school district-community partnerships nationwide to support them in revamping large comprehensive urban schools so that no student could be 'written off'. While the term 'personalisation' was less prominent, the same concept can be seen in the references to student investment in personal learning.

According to Michele Cahill, the developer of the initiative:

> [The] Carnegie Corporation will encourage and support the development of high schools for all students where there is effective teaching and learning, where students are invested in their own education and support their peers to achieve, and where there are clear pathways to higher education, careers and community participation (Carnegie Corporation of New York 2001).

Joyce, Weil and Calhoun (2000) differentiated between the concepts of personalised learning and individualised learning. Historically, individualised learning was developed in the 1970s as an alternative approach to traditional group instructional approaches. At this time individualised learning allowed students to have more time and appropriate instruction if they needed it. The curriculum content and work undertaken by students was set and assessed by the classroom teacher. Joyce et al. acknowledge that with modern advances in instructional technology, such as self-paced multimedia units, a much greater degree of individualisation is now generally possible. However, from a research perspective the concept of individualised learning is not synonymous with personalised learning as the former is simply a teacher-driven approach to learning:

> Students usually work independently on the materials prescribed daily (or every few days) for them, depending on their demonstrated level of competence, learning style, and particular learning needs (Joyce, Weil & Calhoun 2000).

By 2001, the concept of personalised learning began to feature in educational discourse in the USA. Murphy, Beck et al. (2001), for instance, described how a personalised academic high school could be supported. In their publication they addressed:

- effective learning and teaching
- the personalised school built on humanised, intellectual relationships for learning (an endorsement for small schools)
- creative environments that develop a culture of enquiry within a supportive framework
- the idea of linking schools with home and family by encouraging increased parental involvement and school/family connections.

Murphy, Beck et al. (2001) attempted to personalise academic communities so that schools might become more productive. They identified the three key elements that they believed underpinned the relationship between students and adults as:

1. engagement of students in a cohesive, nurturing culture
2. teachers operating in a positive, professionally oriented community
3. a community of commitment driven by strong student-adult relationships, by organising programs and adopting structures that facilitate relationship building.

In 2002, Allen argued that personalisation and personalised learning were integral to the process of instilling a sense of belonging. They create more intimate learning environments, incorporate mentoring, and place an emphasis on group projects.

A text by DiMartino, Clarke et al. (2003), which has 30 contributors, supported a rationale for personalised learning in which personalised learning plans were developed for each student and included community-based learning, project-based teaching, and standards-based portfolios.

In 2003, Clarke provided not only an insight into personalised learning, but into personalised teaching as well. In doing so, he highlighted the need to provide experiences that draw on individual experiences and the need for students to experience a range of learning activities:

> To be effective for all students, we must begin to apply what we know about how individual students construct their learning to the design of educational processes. Rather than suppressing individuality, we should create opportunities for students to express their knowledge. Rather than confining 'choice' to a narrow range of courses in the subject areas, we should design experiences that help students assess their situations, understand their choices, explore options, test their skills, and express their growing confidence in particular directions they have set for their own lives. Rather than confining high school students to only one kind of learning, we should connect them to activities in their communities where learning does make a difference. We should develop programs that let students personalise their learning. Learning is always personal. Denying that maxim condemns us and our students to a frustrating cycle of oppression and rebellion.

The Association for the Supervision and Development of Curriculum (ASCD) also identified personalised learning as a significant factor in high school reform and student retention. To counteract the outdated, one-size-fits-all mentality of the traditional high school, ASCD endorsed personalised learning practices that allowed students to tailor their learning to future plans and individual needs. These promising practices included career-focused tracks; student-driven action plans; individual graduation plans that blend academics and other learning experiences; more rigorous coursework; and personalised daily schedules for struggling students. ASCD claimed that smaller schools which contribute to personalised learning are becoming more widely accepted in the USA and are connected to improved student achievement (Nelson 2007).

In a recent ASCD *Infobrief*, Tom Ewing claimed that the majority of US high schools are failing to prepare students adequately for their futures as 'well-equipped and productive contributors to society' and urged educators to take transformative action in teaching and assessment:

> All high school students must be taught in a manner that values and nurtures their individuality. The academic progress of these young people must be assessed not solely by standardised, multiple-choice tests but also by a variety of other highly personalised criteria.
>
> Personalised learning measures recognise the intellectual capacity, interests, and aspirations unique to each student; the involvement of students in decision making, regarding their academic life; and the appointment of dedicated advisers and mentors for each student (Ewing 2007).

Ewing put forward a proposal for High School Redesign (reform) which describes personalisation as:

> a strategy aimed toward designing and implementing institutional practices and support mechanisms that take the unique characteristics and educational needs of each student into consideration (Ewing 2007).

Recently ASCD has broadened its focus and called upon policy-making bodies, from local school boards through to the United States Congress, to collaborate in fulfilling 'a new compact for the education of the whole child' in K-12 education, based on five student-centred principles stemming from Maslow's *Hierarchy of Needs* and including 'student access to personalised learning and to qualified, caring adults' (ASCD 2007).

In neighbouring Canada, personalised learning has now entered the educational discourse. Hebert and Hartley (2006), both Canadian educators, contributed to the landmark international seminar, *Personalised learning: the future of public service reform*, held in London in 2004. Although they did not provide either a description or definition of personalised learning, they made the following comment:

> By virtue of their profession, educators are called upon to see beyond broad social representations of children and youth so as to support their strengths, legitimacy, diversity and vitality. Not all students are alike and one conception of the student/learner/consumer will not fit all. Imposing one through policy and practices will simply increase inequalities.

Earl (2005), suggested personalised learning was relatively recent and still evolving in Canada and made the following point at the *Personalising learning: high expectations* symposium in Sydney:

> Personalised learning – is [the] next iteration of an ongoing debate about the purpose and possibilities for education systems in a world that is in continuous flux socially, politically, economically, organisationally and technologically.

Although the literature trail does not permit a direct connection to be made between the developments in North America, particular the USA, it is likely that the high profile commitments of bodies such as the Carnegie Corporation and the Bill and Melinda Gates Foundation, and the unequivocal support of the former US Secretary of Education, Roderick Paige (a member of the Carnegie Corporation), would not have gone unnoticed in countries such as the United Kingdom. It is also possible that personalised learning emerged simultaneously in both the United States and the United Kingdom, though their contexts were not identical, as the comments that follow indicate.

United Kingdom

In 1997 the concept of 'customised personalised services' was introduced by the UK Government. This approach was described by Blair (1997) as the coordination of employment and career services, along with the use of new technology to improve quality and efficiency. This position was reiterated six years later when the Government launched the principle of personalised learning, endorsing, at the secondary level:

> personalised learning for every child in new specialist schools and City Academies (Johnson 2004b).

More developed explanations of personalised learning were presented by Johnson to the National College for School Leadership:

> 'personalised learning': an education system where assessment, curriculum, teaching style, and out of hours provision are all designed to discover and nurture the unique talents of every single pupil…
>
> …the most effective teaching depends on really knowing the needs, strengths and weaknesses of individual pupils. So the biggest driver for change and gain is use of data on pupil achievement to design learning experiences that really stretch individual pupils…
>
> Student performance also depends on independent learning. It is inspiring to visit schools where pupils can speak with insight and intelligence about how they learn, about 'mind maps' and other strategies that help them to do so, and about those teaching strategies that are also learning strategies that are giving them skills for life. This is the future. Many teachers are committed to it. But in how many schools is there set time each week dedicated for pupils to focus on learning how to learn? In how many schools is assessment for learning designed to support individual target-setting. The answer is, not enough… (Miliband 2003 cited in Johnson 2004a).

In 2003, David Miliband, then Minister of State for School Standards, provided the following definition that explicitly identified the need for negotiation between teachers and students:

> Personalised learning does not mean each student learning on their own. It must involve work in classes and groups. But it does mean rigorous determination to ensure that each student's needs are assessed, talents developed, interests spurred and their potential fulfilled. It means designing the teaching, curriculum and class organisation of schools to reach as many pupils as possible for as much of the time as possible.

Significantly, Miliband's next line in the quotation says: 'it is already common practice in our most successful schools'. In the same article, Miliband described the various features of personalised learning and moved the debate significantly beyond an argument about 'personalising' being simply about different ways in which students can achieve the same 'standards'. He recognised that 'personalising' calls for more specialised relationships between teachers and students - where the relationships between the institution and the student become more diverse and embrace the following features:

- Assessment for Learning: this is not about teachers needing to test more, but about the exercising of professional judgements and the design of appropriate learning opportunities for different pupils.
- The Curriculum: curriculum and timetables need to be flexible enough to meet the needs of the learner, and be able to promote participation and progression at every stage.

- Teaching: the pace of work must engage pupils. The UK reforms include bringing adult professionals into schools to reduce administrative duties that divert teachers from teaching. These adult professionals also provide the tutorial support as experts in music, arts or science and are drawn from the local community or are students from local universities.

- ICT allows every pupil to progress at their own pace, delivering creativity to match the way different pupils learn, and allowing pupils to link study at home with school work in clear and easy ways. Students who do not have Internet access in the home need to have study support and homework facilities at school.

- School Organisation: at the primary school level, learning is tailored to meet individual needs and children with special educational needs and those who are gifted and talented receive particular support. In secondary education the agenda is considered to be more wide-ranging and includes centres of excellence in every school and federations of schools and colleges that allow students to balance general and specialist study; teaching tailored to the needs of pupils, backed by assessment for learning; mentoring support for pupils; and innovative approaches (Miliband 2003).

Also in 2003, the Working Group on 14-19 Reform was established to examine ways of improving educational offerings to people in the 14 to 19 year-old age group. The Working Group made recommendations in 2004 that included the introduction of 'core learning' and 'main learning'; improved vocational programs; changes to assessment; recognition of qualifications, and increased opportunities for learners (Working Group on 14-19 Reform 2004). One of the areas suggested in what became known as the *Tomlinson Review* incorporated the use of diplomas, which 'would provide the opportunity for all learners to discover and enjoy the use of their particular talents, to the highest level possible, while also acquiring the basic capabilities needed for success in adult life' (Working Group on 14-19 Reform 2004).

Personalised aspects of learning were thus entrenched within the *Tomlinson Review*, and mention was also made of the use of 'extended projects' – something that Tomlinson considered was a feature of the International Baccalaureate, which would:

- ensure that all learners develop and demonstrate a range of generic skills, including research and analysis, problem solving, team-working, independent study, presentation and functional literacy and communication and critical thinking

- help to reduce the assessment burden by assessing these skills, which are currently tested, in many existing schools and colleges, in numerous pieces of coursework across the curriculum, through a single task

- encourage cross-boundary and in-depth learning and wider application of knowledge developed through main learning. In this way the extended project would provide a means of synthesising main learning, while integrating it with the core

- provide a personalised 'space' within 14-19 programs for young people to pursue areas of particular interest to them (pp. 32-33).

In 2004 the Department for Education and Skills (DfES) outlined a new agency system to deliver outcomes for children and young people, in its publication, *Every child matters: change for children.* The five articulated outcomes for children and young people were captured in the phrases:

- be healthy
- stay safe
- enjoy and achieve
- make a positive contribution
- achieve economic wellbeing.

The report focused on personalised, high-quality, integrated universal services, creative partnerships, a common assessment framework, information sharing; and inter-agency governance .

This publication was followed by the *Five year strategy for children and learners* (Clarke 2004), in which the Government announced it would use new reforms to make substantial improvements in every stage of education and children's services from the early years of a child's life to lifelong learning and adult skills. As part of its guarantee to students aged 14 to 19, the Government guaranteed a system that responded to individual cases while not arguing for different outcomes for individuals.

Many related papers and reports surfaced around this time. Evident in all these documents is a view of students not just as intellectual beings, but as people with a range of needs and abilities that must ALL be addressed in some way as educational institutions design their curricula and associated pedagogic practices. For example, in 2004 Tom Bentley, then Director of Demos, an independent London-based think-tank, and Riel Miller, from the OECD's Centre for Educational Research and Innovation, presented personalisation in education as reflecting the larger idea of customer service applied in the educational domain. They argued that personalised learning becomes possible:

> when individuals are capable of identifying their needs and suppliers are capable of recognising, helping elicit and responding in customised ways to the distinctiveness of an individual's needs (Bentley & Miller 2004).

Charles Leadbeater (2004) outlined an approach that was consistent with a more reflective and engaged approach to education when he described personalised learning in the following way.

> Personalised learning does not apply market thinking to education. It is not designed to turn children and parents into consumers of education. The aim is to promote personal development through self-realisation, self-enhancement and self-development. The child/learner should be seen as active, responsible and self-motivated, a co-author of the script that determines how education is delivered.
>
> Schools would have to form networks and federations which shared resources and centres of excellence. An individual school in the network would become a gateway to these shared resources.

Further, Johnson (2004b), in a critique of personalised learning, made the following observation that highlights some of the tensions between the focus on the individual explicit in personalised learning and the need to foster a shared sense of community while negotiating the nature of that community.

> Personalised learning is more important as a political idea than an educational plan. It can be seen as the apogee of a discourse which has been developing for a quarter of a century, but one which offers at best a partial understanding of the purposes of mass education in modern society and which speaks to a radically neo-liberal agenda (p. 227).

In 2005 the Secretary of State for Education and Skills, Ruth Kelly, presented to parliament the *Higher standards, better schools for all* paper which stated:

> Personalisation is the key to tackling the persistent achievement gaps between different social and ethnic groups. It means a tailored education for every child and young person, that gives them strength in the basics, stretches their aspirations, and builds their life chances. It will create opportunity for every child, regardless of their background.

Kelly points out that personalised learning is a term with a history – both in ideas and in practice:

> Personalisation is not new. Our best schools provide a tailored education which combines:
>
> – extra small group or one-to-one tuition for those that need it - not as a substitute for excellent whole-class teaching, but as an integrated part of the child's learning
>
> – opportunities for all children to get extra support and tuition in subjects and activities they are interested in, as well as access to a range of opportunities beyond the school day, including weekend and holiday courses and online learning
>
> – exciting whole-class teaching, which gets the best from every child
>
> – setting or grouping children of similar ability and attainment
>
> – a rich, flexible and accessible curriculum and, for older pupils, one that allows them to mix academic and vocational learning
>
> – innovative use of ICT, both in the classroom and linking the classroom and home (Kelly 2005).

At the system level, the Department for Education and Skills (2006b) reassured educators that personalised learning was not a new initiative, but highlighted the imperative for personalised learning to be embraced in all schools:

> Personalised learning is not a new DfES initiative, it is a philosophy in education. Many schools and teachers have tailored curriculum and teaching methods to meet the needs of children and young people with great success for many years. What is new is our drive to make the best practices universal across all schools, particularly for children whose needs can be the most challenging to meet.

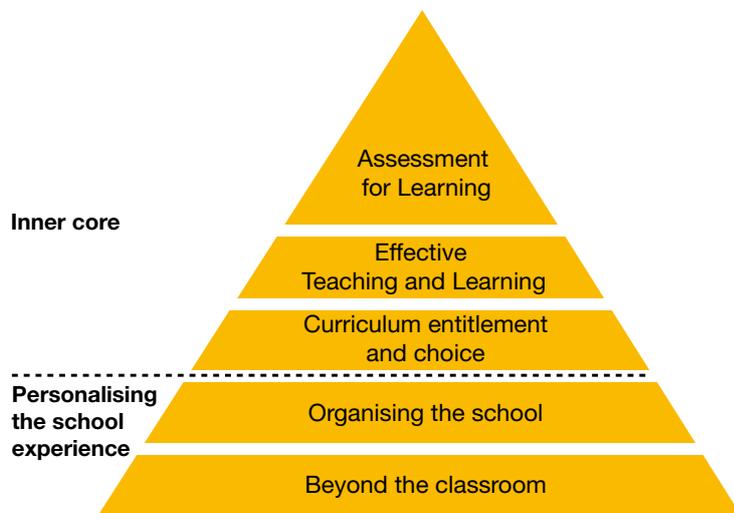DfES proposed five components of personalised learning (2006b), as shown in Figure 1.

Figure 1: The five components of personalised learning (DfES 2006b)

The inner core in this figure focuses on classroom practices, which set the pre-conditions for learning and remove barriers to achievement. DfES considers that the use of information and communications technology (ICT) permeates the five components 'as a way of enhancing creativity, extending learning opportunities and sustaining varied and challenging paces of learning through grouping arrangements'. Each of the five components is summarised below.

1. **Assessment for learning**: clear evidence is required to drive individual attainment along with clear feedback for and from pupils as well as clear links between student learning and lesson planning.

2. **Effective teaching and learning**: for teachers, there is a focus on the development of a repertoire of teaching skills that incorporates whole-class, group and individual teaching and the use of ICT to accommodate different paces of learning. For students, it means a focus by them on their learning skills and their capability to move on with their own learning.

3. **A flexible curriculum**: this is characterised in primary and secondary schools by a combination of a guaranteed core curriculum (including the National Curriculum, religious education, sex education and career education); high quality opportunities to extend learning experiences (including raising standards in literacy, numeracy and ICT, and out-of-hours study support centres); support by adults in school to help students make choices on the basis of assessment results and discussions with parents/carers and flexibility leading to relevant qualifications.

4. **Organising the school for personalised learning**: school leaders and teachers are encouraged to think creatively about school organisation including whole-school teams to understand workforce modelling requirements and increased planning, preparation and assessment time for teachers, as well as teachers learning to use ICT effectively and clear and consistent behaviour policies so that students can learn in safe environments.

5. **Beyond the classroom**: this is integral to supporting learning in the classroom and enhancing pupil wellbeing, which includes guidance and support for each pupil; effective pastoral care; addressing needs with targeted or specialist support; lunchtime and after-school extended learning provisions, and community partnerships.

The UK provides the following explicit outline of personalised learning.

For **pupils** it means:

- having their individual needs addressed, both in school and beyond the classroom into the family and community
- coordinated support to enable them to succeed to the full, whatever their talent or background
- a safe and secure environment in which to learn and have problems dealt with effectively
- a real say about their learning.

For **parents** and **carers** it means:

- regular updates, that give clear understanding of what their child can currently do, how they can progress and what help can be given at home
- being involved in planning their children's future education
- the opportunity to play a more active role in school life and know that their contribution is valued.

For **teachers** it means:

- high expectations of every learner, giving the confidence and skills to succeed
- access to and use of data on each pupil to inform teaching and learning, with more time for assessment and lesson planning
- opportunities to develop a wide repertoire of teaching strategies, including ICT
- access to a comprehensive, continuing professional development program.

For **schools** it means:

- a professional ethos that accepts and assumes every child comes to the classroom with a different knowledge base and skill set, as well as varying aptitudes and aspirations
- a determination for every young person's needs to be assessed and their talents developed through diverse teaching strategies.

For the **DfES** and **local authorities** it means:

- a responsibility to create the conditions in which teachers and schools have the flexibility and capability to personalise the learning experience of all their pupils
- a system of intelligent accountability so that central intervention is in inverse proportion to success.

For the system as a whole it means:

- the shared goals of high quality and high equity.

Australia

References to elements of personalised learning began to appear in Australia approximately eight years ago and a number of definitions and descriptions have evolved since then. In 1999, Australian state, territory and Commonwealth ministers of education met as the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) and endorsed *The Adelaide Declaration on National Goals for Schooling in the Twenty-First Century.* In acknowledging the capacity of all young people to learn, the role of schooling in fully developing the talents and capacities of all students, and the role of governments in safeguarding the entitlement of all young people to high quality schooling and access to a diverse range of educational choices and aspirations, the *Adelaide Declaration* provided a basis for Australian education systems to endorse personalised learning (MCEETYA 1999).

In line with the principles of the *Adelaide Declaration*, and as a means of achieving greater national consistency in curriculum outcomes, MCEETYA proposed the *Statements of Learning* in 2003.

The Australian Education Systems Officials Committee (AESOC) directed the development of the statements by the Curriculum Corporation. The statements describe essential skills, knowledge, understandings and capacities that all young Australians should have the opportunity to acquire by the end of Years 3, 5, 7 and 9. Reflecting a key element of the personalised learning agenda, the statements are intended to guide curriculum development in the states and territories (MCEETYA 2006).

The *Statements of Learning* allow for the inclusion of student-centred and personalised learning approaches in curriculum. The ICT *Statements,* for example, are structured around five broadly defined organisers, namely:

1. inquiring with ICT
2. creating with ICT
3. communicating with ICT
4. ethics, issues and ICT
5. operating ICT (Curriculum Corporation 2006).

Each interdependent 'organiser' requires the active participation of each student in the use, organisation, creation, assessment and communication of knowledge through ICT.

It has now been agreed that all state and territory school authorities will align their curriculum with *Statements of Learning* by 2008 (MCEETYA 2006; Council for the Australian Federation 2007).

In a further national development, the Victorian Government announced in April 2007 the release of *The future of schooling in Australia* report, on behalf of the Council for the Australian Federation, which represents all state and territory jurisdictions. This report resulted from a review of the *Adelaide Declaration*; it reasserts the importance of national collaboration for improved educational outcomes (Council for the Australian Federation 2007).

The future of schooling in Australia assesses the international performance of Australian schools, identifies the key challenges facing schooling in 2007, and sets out a new statement on the future of schooling with a twelve-point action plan. The report places emphasis on high-quality teaching, personalised learning and school engagement with community as essential components in equitable educational systems. It links the opportunities these provide for individual student achievement to national growth and prosperity:

> Our schools must commit to providing every student with an opportunity to learn, and fully develop their particular capabilities. Schooling provides pathways to success for individuals and is the base from which nations prosper.

As part of a commitment to parents and the community, and in line with the expectations of contemporary society, the report recommends that governments and schooling authorities should have 'the capacity to tailor an education for the individual child'. Further, it identifies the need for agreed national curriculum standards, across jurisdictions, to enable the personalising of learning by providing:

- flexibility in schools catering for different groups of students to achieve these standards in different ways
- support for each student to progress along a personalised pathway that reflects specific goals, strengths and motivations
- opportunities for learning with high-quality course material, excellent teaching and flexible organisation
- the use of formative assessment that informs teachers and students about strengths and weaknesses and assists in the development of personalised learning plans.

The report concludes that the process of personalisation is increasingly recognised as an essential part of improved retention and attainment rates.

The national curriculum model presented in *The future of schooling in Australia* advocates flexibility for states and schools to innovate, adapt and share their experiences of approaches that achieve the best results. In particular, it recommends that states and territories explore, 'innovative approaches to teaching and personalised learning'. This idea may be informed by the *Next Practice Programme* being implemented in England (DfES 2006a) to further embed the personalised approach to learning. To facilitate the dissemination and adaptation of innovative practice from local and international sources, the Australian report proposes that states and territories convene a biennial national forum to 'showcase' innovative practice (Council for the Australian Federation 2007).

Personalised learning research and reports also inform the research and development initiatives of a number of independent organisations in Australia. These organisations include the Education Foundation Australia (EFA), Big Picture Company Australia (BPCA), and iNet Australia.

The EFA is an independent, non-profit research organisation, based in Melbourne, whose partnership network includes government and private organisations. It advocates genuine student participation in, and shared responsibility for, learning; closer links between students and teachers; and strong learning communities as a means of transforming education and redressing educational disadvantage. EFA programs are designed to engage and empower students, placing their needs, interests and learning styles at the centre.

In a 2006 paper, EFA researcher Ros Black drew on the experiences of UK personalised learning specialists, Bentley and Miller, to describe what this approach to learning is:

> Personalised learning takes an old idea – that of differentiating teaching and learning in response to the profile of the individual – and makes it a central organising principle, rather than something that teachers might try to achieve within the framework of classroom and curriculum (Bentley & Miller 2004 cited in Black 2006).

Black then goes on to explain that, though different terminology may be used, there are existing parallels between the United Kingdom, Victoria and New South Wales.

> Despite the different language employed, these strategies are all based on similar principles, which [the current] study is summarising under the term 'student-centred learning' (Black 2006).

Informed by its own and external research findings, the EFA identified student-centred learning (or personalised learning) as a proven and 'highly effective' pedagogical approach practised in many schools that 'cater successfully for students, including socio-economically disadvantaged students'. The EFA's definition is captured in a learning framework that:

- is based on a challenging curriculum connected to the lives of students
- caters for individual differences in interest, achievement and learning styles
- develops the ability of students to take control over their own learning
- uses authentic tasks that require complex thought and allow time for exploration
- involves cooperation, communication and negotiation
- connects learning to the community (Black 2007a).

Victoria

Nationally, the leaders of Australia's state and federal governments have made a commitment to continuous and lifelong learning for Australian citizens, which will provide them with tools to participate in work and in rewarding careers (Council of Australian Governments 2006). In Victoria, the literacy and numeracy skills of primary school students rate highly and there is a high rate of young people completing secondary schooling. However, the state government acknowledges that the education system needs continued improvement if it is to reduce the wide variations that exist between students of different socio-economic backgrounds and if it is to keep up with the rest of the world by providing opportunities for people to continue to learn throughout their lives (Department of Premier and Cabinet 2005a).

A number of policy frameworks drive major reforms in Victorian education. *Growing Victoria together: a vision for Victoria to 2010 and beyond* (Department of Premier and Cabinet 2005b) is the Government's vision for making Victoria a stronger, more caring and innovative state. From an education perspective, this vision is underpinned by a commitment to continued improvement for all Victorians. One of the means by which the Victorian Government aims to achieve the changes mentioned above is by establishing processes in which school leaders are able to participate in discussions about possible and preferred futures (Department of Education & Training 2006a). The Department's projects, *Focus on the future – schooling for tomorrow* (DE&T 2006a)*,* and *Schools In: 2020* (DE&T 2006b), are concerned with describing what education may be like for Victorian students in 2020, and the skills and capabilities that educators in the future will require.

In relation to the themes of personalised learning the *Blueprint for government schools* (DE&T 2003a) identifies student needs as central to the learning experience and aims to ensure that all students in government schools, whatever their learning needs:

- are provided with a learning environment promoting wellbeing and lifelong learning opportunities
- are encouraged to be active, engaged learners
- acquire the competencies and skills to operate effectively in our changing society.

Central to this approach is the community dimension in learning. This places schools at the centre of learning communities through partnerships between schools, community agencies and industry in order to involve community in key decisions about schooling.

> Pedagogy involves much more than its most obvious component, the tasks that teachers set. It includes the ways in which teachers interact with students; that is, how they question and respond to questions, use students' ideas and respond to students' diverse backgrounds and interests. It includes the social and intellectual climate that teachers seek to create and the types of learning that they set out to promote. It also includes the decisions they make about framing the content around a series of tasks to be completed or as key ideas and skills that are revisited and built on. Teachers also need to think about how they link and sequence activities and how and what they assess (DE&T 2005).

The *Principles of Learning and Teaching P-12* were also developed as part of the *Blueprint for government schools.* They were designed to support teachers in working with the *Victorian Essential Learning Standards*, another key component of this education reform. The *Victorian Essential Learning Standards* detail the knowledge, skills and behaviours that students will need to live fulfilling and productive lives, whereas the *Principles* focus on the teacher's role in creating and maintaining a learning environment most conducive to meeting students' needs. Using language that is very similar to that used by the OECD (2006), the rationale for the introduction of the *Principles* is that:

> It is clear from research that there is no single 'right' or 'best' way to teach and it is important to recognise that the Principles are not an attempt to mandate a single 'one-size-fits-all' approach. However, there is an increasing recognition of the importance of classrooms that can be characterised as 'learning communities'. In these classrooms, there is an emphasis on building rich meanings for ideas rather than completing tasks. Students in these classrooms are intellectually engaged, and they feel a sense of collaborative partnership with their peers and their teachers. Classrooms like these are extremely rewarding places to teach and learn in (DE&T 2005).

Taken together, the *Victorian Essential Learning Standards*, the *Principles of Learning and Teaching P-12* and the *Assessment and Reporting* advice, directly address how young people learn, and therefore, how the teaching might proceed.

South Australia

Low patterns of retention, participation and completion in the senior secondary years of schooling prompted the Government of South Australia to engage in an 'invigorating and extensive consultation process' to enable all students to complete their SACE (South Australian Certificate of Education) or its equivalent (Government of South Australia 2006).

In 2006 the final report of the review, *Success for all: ministerial review of senior secondary education in South Australia*, strongly endorsed the introduction of personalised learning approaches at senior secondary level. The consultations indicated that to retain students and increase their chances of success in the SACE, a more personalised approach to senior secondary education was needed and would include or involve:

- the capacity for students to create a more individualised and specialised curriculum
- greater flexibility in the curriculum options available to students
- a diversity of learning experiences
- greater engagement with the community
- improved access to support services and personnel.

In reference to the last point, there was:

> Strong support for a personalised approach to learning, using case management strategies to support young people, including mentoring and counselling for those inclined to drop out of the system and those struggling to stay in it (Government of South Australia 2006).

The review panel identified the characteristics of a 'relevant and contemporary certificate of education' emerging from the consultation process and affirmed the need for the new SACE to be flexible and responsive, credible, inclusive, connected, worthwhile, futures oriented, and supportive of quality leaning and teaching. The review panel also identified two key features of the new SACE intrinsic to personalised learning: the learning space concept which would embrace lifelong learning needs, and the personal learning plan (PLP):

1. The learning space concept encompasses multiple learning sites (within and outside the school or primary learning place), ICT as a learning environment for students and teachers, and the new role of schools as 'learning brokers' with the community and outside organisations on behalf of students, as well as their more traditional roles as learning providers and facilitators.

2. The PLP concept allows each student a voice in decision-making and hence, a 'greater sense of purpose and control' in the learning experience. It offers opportunities and structured support to the individual student to clarify aspirations, explore issues of personal relevance, and reflect critically on their own learning. The PLP is designed as a 'structured learning activity' whose key outcome will be a strategy or plan focussed on the individual student, however it will be 'the process of arriving at that plan that will constitute the substance of the PLP' (Government of South Australia 2006).

New South Wales

Three years after the release of the *Employability skills for the future* (Department of Education, Science and Training 2002), the NSW Minister for Education said:

> Students have individual strengths, needs and aspirations, and our education system should know how to respond to each one. The evidence is clear on what works in education:
>
> - having high expectations of students
> - high-quality teachers
> - parental encouragement
> - a school culture that promotes student achievement, and opens up opportunities for students.
>
> …we are not only interested in helping those who are falling behind. We also believe that every student can achieve their best, and that 'best' is better than ever. So the potential of the child who wants to enter the most competitive university courses is on the same footing as the child who needs assistance with reading (Tebbutt 2005).

According to the Centre for Learning Innovation in NSW:

> Personalised learning is what student-focused teachers do when they recognise and address the needs of individual learners. It builds on the principles of flexible delivery and quality teaching to support individual students as they travel along their own learning journeys. There is a range of elements within personalised learning:
>
> - high expectations of learners
> - infrastructure and technology to support personalised learning
> - individualised teaching and assessment strategies
> - responsibility for own learning taken by students
> - involvement and collaboration in learning by groups such as industry and the community
> - promotion of personalised learning in the workplace.
>
> Personalised learning encourages high expectations and successful outcomes for every student. It relies on sound assessment information, student engagement and targeted attention to specific needs (Centre for Learning Innovation 2005b).

The NSW *Report of the consultation on future directions for public education and training: one size doesn't fit all* (2005) drew out specific directions and set out an agenda for the future. Support for the needs of the individual (personalised learning) was a significant theme in consultation responses regarding preschool and school-aged children. Many respondents commented on the indispensability of ICT as a tool to support learning and noted its potential in personalising learning:

> Personalised learning and modern Learning Management Systems will allow students to engage in learning experiences anywhere, anytime (Department of Education and Training 2005).

A key recommendation of the report was the continual expansion of 'the range of e-learning materials to facilitate innovations and support personalised learning' as, effective ICT use provides choice and opportunity for students, particularly in remote areas and 'greatly enhances the ability to personalise learning for each student in ways that have not been previously possible' (DET 2005).

New Zealand

New Zealand is introducing the concept of personalised learning as a system-wide approach. In 2006, a booklet titled *Let's talk about personalising learning* was launched by the Minister for Education. The booklet introduces both the concept and practice of personalising learning as a starting point for discussion in the whole community (Ministry of Education NZ 2006).

Personalising learning is described as a means of renewing inclusiveness, increasing student participation and providing direction in the development of twenty-first century education in New Zealand. A recent government press release identifies the key changes needed and obstacles encountered in the organisation of New Zealand secondary schools for personalising learning. The press release acknowledges that the education system is 'at its heart still a one-size-fits-all model', and emphasises that in line with societal change, students, too, need to change from 'passive recipients into active participants'. A major transformation of the education system is mooted and will include the development of flexible and responsive school organisational structures shaped around students (Maharey 2007).

Personalised learning is not perceived, primarily, as individualised learning in New Zealand. There is an emphasis on personalising learning as 'co-construction, where learners share and develop knowledge together' (Maharey 2007). As early as 2004, New Zealand published a benchmark study on a school systems approach to peer tutoring. A digest of the study was featured, as a contribution to personalised learning research, on the UK Standards Site (Medcalf, Glynn & Moore on The Standards Site, DfES 2004).

OECD

The work of the Organisation for Economic Cooperation and Development (OECD) reflects the broader agenda which frames the personalising of education.

According to the OECD, the aim of 'personalising learning', increasingly prominent in thinking and policy discussions on the future of education, has emerged from the knowledge that 'one-size-fits-all approaches' to school knowledge and organisation do not successfully meet the needs of individuals or those of a knowledge society (OECD 2006). The emphasis in relation to personalising education is that learning is lifelong and therefore reaching beyond the traditional confines of schools:

> We do not learn for the school, but for life. This educational principle is more important today than ever (OECD 2006).

The OECD advised though, that 'personalisation' can have many meanings and poses 'profound questions about the purposes and possibilities for education' (OECD 2006). It noted that the concept of personalised learning was neither fully articulated nor operationalised and that empirical evidence of the usefulness of the concept was still lacking:

> Education is a particularly useful proving ground for the potential of personalisation policies because of its political salience, but also because most people believe that learning will be a key ingredient of a successful post-industrial society or economy. Schooling systems are already in flux, and the expectations and practices of teachers, pupils and parents are also moving fast. Reforms which make personalised learning a practical reality for all learners, wherever and whenever they learn, could have a much broader impact. This agenda should be seen as an attempt to understand how our collective efforts can better serve our collective aspirations (Bentley & Miller 2006).

A number of perspectives were provided in the OECD's report reflecting the spectrum of foci from the provision of more personal control over education and life trajectories to the simultaneous search for ways by which such provision can be integrated with a sense of shared and evolving community. This can be seen in the following definitions and descriptions:

> Personalised learning is the way in which our best schools tailor education to ensure that every pupil achieves the highest standard possible…[Through] assessment for learning and the use of data and dialogue to diagnose every students' learning needs…teaching and learning strategies that build on individual needs [so that] curriculum choice engages and respects students…[which requires] a radical approach to school organisation…[and] community local institutions and social services supporting schools to drive forward progress in the classroom (Miliband 2006).

> It is part of the holistic nature of teaching as a profession, the concern to touch hearts as well as minds, to nourish a hunger for learning and help equip learners with a proficiency and confidence to pursue understanding for themselves (Hopkins 2006).

> The personalisation agenda is also about promoting lifelong learning and of reforming public services more broadly. The reference to 'learning' is important because the agendas reach out well beyond the institutional confines of the places called 'schools' (Ischinger 2006).

A complementary OECD publication on demand-sensitive schooling presented evidence and issues around choice and voice in education. It identified 'the critical shift from traditional schooling' provided by supply-led systems, characterised by lack of opportunity for external voice to be heard, towards future-oriented systems which are 'more sensitive' to parent and student demand. 'Voice' in this context means parents or students directly participating in 'decision-making in schools' and having 'an important role in the learning process (personalisation)' (OECD 2006).

More recently, in defining the concept of 'human capital' as 'the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic wellbeing', the OECD cautioned that:

> It's increasingly important for societies to cater for the education needs of every young person, not just traditional academic high-flyers. The price of not doing so could well be increased social inequality and slower economic growth (Keeley 2007).

The following section presents a range of international and Australian case studies that are relevant to the personalised learning agenda.

PART 2: Case studies and emerging practice

United States

Big Picture Schools initiative

Promoting the key concepts of personalised learning, Elliot Washor and Dennis Littky are the co-founders of the *Big Picture Schools* initiative. The philosophy is grounded in educating 'one student at a time' with the stated aim of promoting and creating personalised education programs that are unique for each student. In *Big Picture Schools*, students design their individual learning paths, in conjunction with teachers, parents and community mentors, and school-based learning is blended with service learning and real-world community experience in order to heighten individual interest and motivation (Washor & Mojkowski 2006).

The distinguishing features of the *Big Picture* model referred to previously emphasise more the sense of the curriculum being shaped by BOTH the students' needs and the insights/values of the school. They include:

- individualised learning plans that not only meet rigorous educational standards, but are also developed through the student's personal interests
- an integrated internship in which students go into the community for two days per week and do work based on their learning plans, in relationship with their professional mentors
- groups of up to 15 students working with the same teacher while in school, constantly developing relationships between the teacher and the students
- participation by students in quarterly dissertation-style presentations instead of tests – before a panel of teachers, parents, mentors and peers
- strong partnerships with families and community organisations
- recruitment and training of principals and advisers while consistently reinforcing a culture of lifelong learning (Littky 2004).

Annenberg Institute for School Reform

The Annenberg Institute for School Reform advocates a similar, student-centred agenda. Established in 1993, the Institute aims to promote equity and quality education for disadvantaged children and communities, especially in urban areas, and works with a number of project partners including the Carnegie Corporation of New York (Schools for a New Society program) and the Bill and Melinda Gates Foundation.

The four core principles that underpin the work of the Institute, *Results Matter, Equity Matters, Communities Matter,* and *Learning Matters*, reflect aspects of personalised learning agendas emerging elsewhere. These aspects include:

- school and systemic reform
- equitable access to lifelong learning for all students
- educators and communities
- the role of community as a partner in education
- the development of inclusive learning communities
- the co-design of knowledge and tools by districts (systems), their schools and partners to sustain learning communities (Annenberg Institute for School Reform 2007).

United Kingdom

Learning through the curriculum

This study focussed on three elements of personalisation: curriculum entitlement and choice; school organisation; effective teaching and learning strategies. It explored an alternative approach to learning from that offered by the 11-16 National Curriculum, and took as its model the International Baccalaureate Diploma (IBD) Middle Years Programme (MYP). The research involved four state schools that were at various stages of MYP. It used a focussed interview as a research instrument with school leaders, and a focus group interview as a research instrument with Year 7 students. The main findings from both school leaders and students were summarised as:

- the school as a learning community for all those involved in the educative process
- the learner at the centre of the educative process
- learner autonomy developed within a clear curriculum framework
- active rather than passive learning
- teacher as guide and facilitator
- learners as constructors of their own knowledge.

It contended that personalised learning and the MYP was underpinned by a constructivist approach. It also singled out four areas where personalisation might encounter problems: school organisation; resources; subject-specific bound teaching styles; and the national examination system. Positives included: the concept of a 'learning community'; the 'shape' of the curriculum; and the learner in the educational experience (Rataj-Worsnop 2006).

Personalised learning: an overview of five projects

This study, encompassing five projects offered endorsement of some aspects of personalised learning, for example the emphasis on learners and learning. It also offered 'constructive challenges' of others, such as a possible loss of focus on learners in favour of a focus on teaching provision. It questioned whether there were sufficient connections to lifelong learning issues, that is, developing learning dispositions and learner identities. It discussed some identified challenges raised by personalised learning. The five projects were:

- Learning How to Learn, which focuses on 'assessment for learning'
- Improving the Effectiveness of Pupil Group work, where students support each other's learning
- Consulting Students about Teaching and Learning, reflecting a growing interest in 'pupil voice' within curriculum entitlement and choice
- Home School Knowledge Exchange, looking at extension beyond the classroom
- InterActive Education: Teaching and Learning in the Information Age, researching the use of advanced technology to promote learning in the classroom.

Each report included a case study. The last section of the paper outlined four main challenges in the development of personalised learning as:

- conceptualisation (are the components of personalised learning and the relationships between them empirically supported and sufficient?)

- authenticity (is this initiative really about learning, or about teaching and curriculum delivery?)

- realism (are the ambition and rhetoric over-reaching themselves?)

- risks (what are the major difficulties likely to be and how can they be managed?) (Pollard & James 2004).

Personalising the curriculum for 14 to 19 year-olds

This study investigated the interpretation of personalised learning, and its role in supporting the transformation of the curriculum in secondary education. Four schools were selected for the research. The authors considered the process of personalisation in the different schools, including a focus on leadership and partnerships that have brought about change. There was also a consideration of barriers to change, and how these had been overcome. They employed semi-structured interviews with leaders in schools, pupil focus groups and questionnaires to parents to obtain their data. Common themes in the findings included:

- flexibility as a key to personalisation

- choice is not necessarily increased with personalisation

- positive responses from students

- parents agreed that their children seemed motivated

- personalisation was seen as a 'journey' – evolution, rather than revolution – by leaders

- a range of curriculum routes and assessments were employed by the sample schools

- different perspectives were used

- partnerships and school organisation were key elements.

The findings also included summaries of the experiences of personalisation for both students and parents; how curriculum practice may have been affected in the four schools; the role of leadership; and why the schools embarked on change. The overall analysis was that personalisation is a worthwhile process, although it poses challenges for leadership, and meaningful partnerships are essential to providing a range of settings and a broader range of courses, personnel and assessments. Only four schools were studied, but the broad understandings they contributed to the topic included:

- an achievement ethos, structured non-hierarchically, can bring success to all students

- core curriculum courses, because they only form a limited aspect of the curriculum, are more successful for more students

- the perceived loss of subjects areas such as geography and history was proved to be unfounded in this study

- creativity and student voice were enhanced – potentially transformational and inspiring

- students appeared to contribute to the success of the curriculum routes and pathways (Cresswell, Morrissey & Soles 2006).

E-learning in schools and further education colleges

E-learning, seen as having the potential to revolutionise teaching and learning, is a key priority for education and training policy in the UK. This report identifies resource planning and management strategies already being adopted by institutions making the transition to embedded e-learning. It includes factors that affect decisions about resources, costs and impacts associated with adoption and integration, attitudes towards adoption, and the main outcomes of integration into mainstream activities. The main findings are:

- ICT strategies are commonplace but only a small proportion of institutions have a strategy that is part of the overall teaching and learning strategy
- development of e-learning strategies are mainly individual department decisions
- subject teachers and leaders have less input into decision-making than senior management
- phased approaches to implementation have generally been the most successful for staff (Armstrong et al. 2004).

Greenwich Millennium Primary School

'Cutting edge' ICT was incorporated into the design of the building, in a government attempt to see if sophisticated infrastructures would help improve standards and encourage new ways of teaching and learning. Key findings included:

- ICT skills of both staff and students increased
- laptops for teachers and interactive whiteboards improved planning and better quality lessons, although more time was needed to keep up-to-date with the technology
- numeracy and literacy improved with high-quality software
- internet usage increased
- engagement, motivation, concentration, confidence of students increased, including special needs students
- evaluation showed marked improvement of this school over others in the area
- parents were positive, but home-school links were in the 'early stages'.

Although the research was not specifically about personalised learning, the fact that Greenwich Millennium Primary School was heralded as 'cutting edge' in relation to its specific design for the use of ICT, the research findings that some improvements were noted by both students and staff are not disconnected from the ethos of personalised learning, so that it is likely that this is one of the unmentioned 'number of initiatives being implemented within the school' (British Educational Communications and Technology Agency 2004; Priest, Coe, Evershed & Bush 2004).

Australia

Victoria

The Department of Education and Early Childhood Development has evidence-based practice and resources on its various websites. For example, the *Knowledge Bank* <http://www.sofweb.vic.edu.au/knowledgebank/> is a showcase for 'best practice' in Victorian schools. The case studies include work undertaken by teachers participating in the Teacher Professional Leave program as well as other examples submitted from practising teachers. The case studies are categorised under five headings: Student Learning, Building Leadership, Professional Learning, Whole School Improvement and Community Involvement and Partnerships. Examples of work undertaken in Victorian schools that demonstrate key factors of personalised learning include:

Primary schools

- Child centred assessment and reporting strategies – Glen Katherine Primary School
- Supporting Students with Additional Needs (SWANs) – Sunshine North Primary School
- 'I've got that Somers feeling' - Please explain! – Hastings West-Park Primary School and Somers School Camp

Secondary schools

- Student led interviews as an assessment and reporting initiative – Copperfield College Kings Park Campus
- Global Journey Program – Kambrya College
- Managed Individual Pathways for students (MIPS) program – Mordialloc College

School clusters

- Student Leadership – Elwood 'Village of Learning' Cluster
- Digital Portfolios – Sale Cluster

Next Practice

The Department of Education and Early Childhood Development has been encouraging and supporting innovative practices for some time, as demonstrated by its *Schools for Innovation and Excellence Initiative*. According to the Department:

> Innovation is about doing things in new or better ways to create new and valued outcomes. Innovative schools are dedicated to achieving excellence in student learning and are committed to the discovery and implementation of new or improved teaching techniques and learning practices. In an educational context, innovation is about adding value to the outcomes for all students rather than just reform for reform's sake. In today's knowledge-driven society, it is essential that students are highly literate, numerate and articulate. New ways of learning such as collaboration and creative problem solving are in demand and require adaptive, entrepreneurial skills. Innovative schools meet these challenges by drawing on the wealth of talent, insight and expertise of the whole community and working together to bring about better environments for learning (Department of Education & Training 2003b).

Building on this initiative, the Department's Innovation and Next Practice Division has recently introduced its *Next Practice* program which is informed by the UK next practice model and intended to take current best practice in Victoria to a new level.

While developing the new program, the Department hosted a forum for educators in February 2007, with Valerie Hannon, Director of Strategy, Innovation Unit, UK. Hannon discussed the concept of 'disciplined innovation', which enables a system and its schools to move beyond what would generally be called 'best' practice in order to generate what might be the 'next' successful practice (Hannon 2007).

As in the UK, personalised learning is intrinsic to the *Next Practice* program in Victoria. The Innovation and Next Practice Division identifies the elements of personalised learning in practice as:

- tailoring education to individual need
- ICT rich learning environments
- student voice
- schools as networks
- reorganisation of school curriculum, administration and space.

Next Practice: Design Teams Pilot Project has set up design teams of teachers, researchers, and other experts to work collaboratively in producing and sharing new professional thinking and practice including tailoring education to individual needs. The work will extend beyond current 'best' practice in two content areas: Pedagogy and Space, encompassing the relationship between teaching and learning practices and learning environments; and Literacy, encompassing established and emerging forms of twenty-first century literacy. These two content areas have been selected for trial projects as they address key departmental priorities, namely *Building Futures* and Literacy. Selected schools and school networks will be closely involved in the pilot (Department of Education 2007).

Showcasing Victorian Innovations in Education

In May 2007, the Innovation and Next Practice Division held *Showcasing Victorian Innovations in Education,* an all-day series of forums, with international and local presenters, and related workshops. The successful event brought together over 600 educational leaders to examine the concepts of practitioner-led innovation, explore current innovative practice in schools (as presented by school teams on the day), discuss factors which can support or inhibit innovation in schools, and share strategies to identify local and global next practice issues confronting schools. It realised a key recommendation of the recently-released report, *The future of schooling in Australia*, that states and territories explore 'innovative approaches to teaching and personalised learning'. The Victorian showcase provided a possible model for the 'showcase' national forums proposed in the report to facilitate the dissemination and adaptation of innovative practice from local and international sources (Council for the Australian Federation 2007).

The *Showcasing Victorian Innovations in Education* forums brought together educational leaders for a hands-on exploration of innovation in schools. This included:

- validating personalised learning with student voice
- new concepts in the use of time, space and design
- engaging community partnerships
- innovative use of ICT to stimulate learning
- leadership and vision for the evolution
- transformation of teaching practice.

The Showcase provided a forum for discussion, with delegates exploring the factors that can support or inhibit innovation in their schools, generating strategies to overcome obstacles, and examining the concepts of practitioner led innovation and next practice.

Queensland

Cherbourg School

As principal, Chris Sarra led the transformation of Cherbourg School in Queensland. Sarra (2005) described a school in which the students and staff accepted the belief that being Aboriginal meant being second-class, and that poor academic performance and poor behaviour were inevitable consequences. Sarra challenged the school community and the local community to develop a strong sense of what it means to be an Aboriginal Australian so that the students would be able to perform on an equal footing with other Queensland students. 'Strong and smart' became the catchcry as the school strengthened its relationship with expertise within the broader community and local people and began working with the students and the staff. Although this case study does not explicitly address what is meant by personalised learning, it exemplifies the challenges and hard work required by school leaders if they wish to bring about change that will improve the outcomes for their students and staff members.

New South Wales

Vocational Educational and Training Initiative

Influenced by innovations occurring in the United Kingdom, the New South Wales Department of Education and Training funded a project in 2004-2005 to support teachers who were offering more personalised learning options for their students in the vocational education and training sector (known as BVET). Eight pilot projects were supported to consider personalised approaches to the delivery of training packages, particularly, the Certificate IV in Training and Assessment training package, as well as personalised approaches to career development and job placement.

In 2005 the Department hosted a two-day symposium entitled *Personalised learning: high expectations.* The conference explored local and international experiences of personalised learning considered essential to realising and sustaining personalised practices (Centre for Learning Innovation 2005a).

South Australia

South Australian Youth Engagement Strategy

The *South Australian Youth Engagement Strategy (*SAYES), also linked to the new SACE implementation, attempts to personalise learning in senior secondary years by building engaging curricula and defining and sharing appropriate pedagogy, assessment and credentialing 'so that each young person's learning plan is supported and accredited within a seamless learning system'. The South Australian Department of Education and Children's Services (DECS) held a major workshop, *Every Student Matters,* in 2006, to develop these issues further. A number of exemplary high school case studies for personalised learning highlighting practices in student voice, personalising learning planning and ePortfolios, personalised curriculum negotiation, reflective learning, and integrated assessment are accessible (DECS 2005).

Australian Science and Mathematics School

The Australian Science and Mathematics School (ASMS), exemplifies the new personalised approach to senior secondary schooling in South Australia.

ASMS is a specialist public school that caters for students in Years 10-12. The school is a purpose-built facility (and ICT environment) designed to promote and support highly collaborative, interactive student-directed learning within an innovative curriculum. The school claims that its students, with their passion for science and mathematics 'want to be challenged and be made responsible for their learning'. It places a strong focus on the development of qualities and skills suited to future work and nurtures student aspirations for (later) leadership in the community (ASMS 2007).

Being part of a community of learners is pivotal to the approach of the school, and there is strong support for teachers as learners. The school encourages a global outlook and provides opportunities for students and teachers for local, national and international interaction and learning. In an environment rich with interactions between scientists and educators, there has been a pedagogical shift away from teacher-directed activities to student-directed activities (ASMS 2007).

In this school, teachers have become facilitators of learning as they coach, challenge and authenticate learning. Although there are no boundaries to learning for students, they must demonstrate and verify their learning. Key activities within the 40 minutes spent in tutor groups each day include metacognitive training, personal learning plan development and student-tutor relationship building. Assessment of learning at ASMS has moved from the conventional genres to a limitless number of genres, including: performance profiling; multimedia; web-based; on-line; community-based; industry-based, and learning e-portfolios (Davies 2005).

Tasmania

Rosetta High School

Rosetta High School in Tasmania has customised its programs and developed personalised learning for its students in a 'transformation' that highlights relationships, personalisation and context. The features include personal bonds between students and teachers to motivate and engage, particularly 'at risk' students, and the scaffolding of learning where the learner's knowledge is valued and understood. There are also structures for communication and collective problem-solving, broader teacher roles, personalised instruction strategies, and teacher support. Speight describes the very positive and encouraging experience of 'thirty students most likely to fail in our school [who were] enjoying success' (Speight 2005).

Western Australia

Sevenoaks Senior College

Situated in Perth, WA, the school attempts to maximise curriculum opportunities in a technology-rich and outcomes-focussed environment within the ICT curriculum. Curriculum materials and individualised learning programs are created online, and the focus is on learning that comes from student enquiry, critical thinking and problem-solving, using a variety of sources. Through ICT, students are encouraged to be active learners responsible for their own learning, resulting in project-oriented, collaborative work that promotes autonomy and engagement. The development of individualised learning resources and mentoring of staff members who need help with the technology are part of an ongoing program.

Other organisations

Education Foundation Australia (EFA)

An EFA initiative, *ruMAD* (*Are you making a difference?*), creates 'a genuine context in which students can investigate issues of concern to them and take action to bring about change, both in the school and in the community' (Black 2007b).

Another EFA initiative is the City Centre, 'a classroom without walls', which opened in Melbourne in 2004. It offers a week-long program for Years 9-10 students to undertake independent research activities and organised workshops using the resources of the Central Business District (CBD). The City Centre model was informed by research on effective pedagogies, including the Victorian Middle Years Research and Development Project (MYRAD) and it uses skills that the Victorian Essential Learning Standards (VELS) has identified as essential skills for learners (Suda 2006).

The Buckland Outreach Project, based on the City Centre model, has been trialed in selected schools in Neighborhood Renewal areas. The aim of the project is 'to have a real impact on the Year 9 curriculum of these schools' by effectively using the learning resources of the local area (rather than the CBD) and thereby harnessing 'the potential of the community as a source of authentic learning' (Suda 2006).

An adjunct to the City Centre program is the Teacher Learning Circles (TLC) Pilot. According to the EFA, the TLC address what teachers need to know about teaching and learning in order to experiment with new and innovative approaches to learning, especially how to facilitate powerful and dialogical learning essential to action research and the active learning process required by both students and teachers in student-centred learning (Suda 2007).

'Student-centred learning', the preferred term used in a recent EFA report, *Crossing the bridge: overcoming entrenched disadvantage through student-centred learning*, is equated with 'personalised learning' as an effective learning approach:

> Our decision to focus on personalised or student-centred learning comes out of our 18 years of work in supporting student-centred learning in government schools. It also comes out of our recognition that effective learning is increasingly being defined as learning that puts the learner at the centre (Black 2007a).

Crossing the bridge reports on an EFA study undertaken in 2006 at nine Victorian government and Catholic system schools in the western metropolitan region of Melbourne that have implemented student-centred learning in the middle years. All the case study schools believe that student-centred learning 'is building student skills in a way that previous approaches have not'. The schools also cite improved student confidence, increased student engagement with and responsibility for learning, higher teacher expectations of students, and more productive teacher-student relationships and student group dynamics as outcomes of the student-centred approach (Black 2007a).

Big Picture Company Australia (BPCA)

BPCA, a non-profit organisation in partnership with Big Picture Company USA, was established in November 2005. The organisation hopes to 'catalyse vital changes in education by generating and sustaining innovative, personalised schools that work in tandem with the greater community'. As mentioned previously, the Big Picture philosophy is grounded in educating 'one student at a time' in a community of learners and personalising education programs for each student (BPCA 2006).

In October 2006, Viv White delivered a presentation on behalf of BPCA at the Australian Council for Educational Leaders Conference in Canberra (White 2006). The three common themes in Australian education reform at the secondary level which emerged were:

- personalisation - creating settings where teachers and students know each other well
- adult world immersion - situating students in the world beyond school
- intellectual rigour - a strong focus on productive pedagogy.

Examples of state and territory reform programs were cited in the presentation including Victoria's provision of education in the middle years, the *Leading Schools Program*, the *Victorian Certificate of Education*, and the *Victorian Certificate of Applied Learning*. A recommendation was made to take reforms further through researching and trialling a new design - an 'artisinal', small school model represented by the MET system of (Big Picture) schools in the USA. The twin goals outlined by BPCA were:

- to design a Big Picture school by 2009 in partnership with government and the profession and the local community
- to establish a network of Big Picture inspired schools to support the research and development of the Big Picture Australian model (White 2006).

In a further development, BPCA, in collaboration with the University of Tasmania Institute for Inclusive Learning Communities and the Australian National School Network, held a course in February 2007 on personalising learning for educators. Participants were able to undertake the course as a post-graduate unit leading to a Graduate Certificate of Education (BPCA 2006).

iNet

iNET Australia in affiliation with iNet Global (international networking for educational transformation), provides opportunities for students and educators to participate in regular online conferences on learning and to access innovative practice through online case studies. iNet claims that 'student voice is potentially the most powerful tool in the global agenda for personalising learning' (iNet 2007).

As part of a series of workshops and conferences (2004-2006) on personalising learning, iNet brought students together from around the world, in March 2006, to have their say on education in the twenty-first century. The conference, titled *The Personalising Learning Debate*, gave students the chance to 'use their voice effectively' and gave educators an insight into student perceptions of education (iNet 2006).

Professor David Hargreaves wrote a set of documents for iNET under the general title *Personalising Learning*. He explored particular 'gateways' which, when linked, might provide schools with a path to more 'sustained and systematic personalisation'. The nine 'gateways' described by Hargreaves are:

- assessment for learning
- learning to learn
- student voice
- curriculum
- new technologies
- school design and organisation
- advice and guidance
- mentoring and coaching
- workforce development (Hargreaves 2005).

Four concepts emerged during the series of conferences and workshops, to underpin the nine 'gateways', and point the way to deeper aspects of personalisation. They are the concepts of deep learning, deep experience, deep support and deep leadership (iNet 2006).

Conclusion

As indicated in this report, there is an important element of context in understanding what personalised learning means. There is a need for educational institutions and systems operating within their individual contexts to respond in ways that support the diverse personal aspirations of learners. The endeavour to respond equitably to all individuals and groups is a value common to schools and their systems. Personalised learning can appear to challenge that value by suggesting that responding equitably is not the same as 'responding in the same way' to everyone.

The comparison between US and UK approaches to personalised learning highlights the different contexts. Generally, US approaches work within the context of schools improving the overall performance of students who may be underachieving. Conversely, the UK approach is whole-of-government. Within education, it requires an integrated approach involving the school, its community and the wider society responding to the needs of students, rather than simply encouraging students to perform better on predetermined measures.

New Zealand's *Statement of Intent 2007-2012* (Ministry of Education 2007) proposes that personalising learning will offer a fresh perspective on how to achieve success in education for all students. The report suggests:

> The education system needs to become more responsive to the needs of all learners. Resources, processes and infrastructure need to be reoriented to allow for this. Barriers to flexibility and responsiveness will need to be addressed and all part of the education system will need to work towards this common goal.

In Victoria, elements of personalised learning are appearing in various government reports and school programs. This report provides a basis for further consideration by schools and the system in the emerging discussion, issues and challenges around personalisation in education.

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