

Personalising Learning in Open-Plan Schools

Vaughan Prain, Peter Cox, Craig Deed,
Debra Edwards, Cathleen Farrelly,
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ACRONYMS

ACARA	Australian Curriculum Assessment and Reporting Authority
AusVELS	Australian Curriculum/Victorian Essential Learning Standards
BEP	Bendigo Education Plan
BLPCP	Bendigo Loddon Primary Care Partnership
DEECD	Department of Education and Early Childhood Development (Victoria)
ICSEA	Index of Community Socio-Educational Advantage
NAPLAN	National Assessment Program-Literacy and Numeracy
PLEQ	Personalised Learning Experience Questionnaire
SAR	Students as Researchers
SES	Socio-economic Status
SRC	Students' Representative Council
SSC	Student Support Centre
TA	Teacher Advisor

SECTION 1
KEY ORIENTATIONS

VAUGHAN PRAIN, PETER COX, CRAIG DEED, DEBRA EDWARDS,
CATHLEEN FARRELLY, MARY KEEFFE, VALERIE LOVEJOY,
LUCY MOW, PETER SELLINGS AND BRUCE WALDRIP

1. CHARACTERISING PERSONALISING LEARNING

PERSONALISING LEARNING

Can removing classroom walls enable more personalised learning and enhance student wellbeing? In this book we claim these outcomes are possible in an open-plan school for low SES students, if appropriate conditions are met. A major condition is the development of these spaces as supportive communities where teams of teachers address learners' individual and collective needs. In making this case, we draw on a three-year Australian Research Council study (Improving Secondary Students' Learning and Wellbeing, 2011–2013) where we analysed an attempt to improve educational and wellbeing outcomes for 4000 Years 7–10 predominantly low SES secondary students in regional Australia. This approach, the Bendigo Education Plan (BEP, 2005), entailed three major strategies. These were: (1) rebuilding four schools to include open-plan layouts, (2) developing teachers' professional knowledge to enable effective teaching, learning, and student wellbeing in the new settings, and (3) curricular reform leading to a more explicit, differentiated curriculum, replacing a traditional age-based curriculum with a stage-based one. We argue that these three strategies in combination were crucial to positive outcomes for the BEP (see Prain, et al., 2014). We also report on attempts to personalise learning in two other regional schools with similar SES profiles.

The BEP strategies operated partly as intended by the designers, but also in unexpected ways, and provide insights into effective curricula for like-student cohorts. In researching challenges and gains we have developed new understandings of influences on students' engagement with schooling, and how personalising learning, student wellbeing, and a quality curriculum interact. In arguing that quality learning and wellbeing require personalised learning experiences, our book deals with larger questions of effective schooling for low SES students and curricular renewal in general.

In developing our case, we focus on both generic conditions to promote academic success and wellbeing for low SES students in open-plan settings, and conditions that personalise subject-area learning across four years of secondary schooling (Years 7–10). By generic conditions, we refer to influences such as broad teacher professional learning and adaptation to the possibilities of these new settings, whole-school approaches to curricula and student wellbeing, and effective, coherent use

of virtual technologies (ICTs). The first section of our book outlines these generic conditions, while in the second section we report on case studies of quality learning in English, mathematics, science, art, social studies/humanities, and a teacher advisor program. We recognise that differentiation poses distinctive challenges in different subjects, and makes increased demands on teacher professional expertise. Our book concludes with a summary of findings and an invited response from an independent expert, Anthony Edwards.

In this chapter, we (1) provide an overview of the context of our study including the open-plan design of the schools, and a brief vignette of the four participant BEP schools; (2) outline our multi-theoretical perspective for the study, including our research aims and methods; (3) present our account of quality learning as personalised in these settings; (4) provide a snapshot of student learning gains (2008–2014); and (5) identify key generic principles we consider enabled success in addressing BEP goals.

Changing Education in Bendigo

The BEP (2005) was devised to address concerns about the quality of education and wellbeing in this predominantly low SES student cohort. These concerns included low rates of student school attendance, modest student academic performance when compared with metropolitan counterparts, and persistent signs of poor student wellbeing, evident in high rates of teenage pregnancy, bullying, high levels of psychological distress, and disengagement (Prain et al., 2014). The Plan also entailed the demolition of five Years 7–10 schools, and rebuilding four schools, with each school structured into four open-plan communities. The four Years 7–10 schools have a significant number of students in the lowest socio-economic status group, as judged by Youth Allowance payments (ranging from 32 to 52% per school) (Bendigo Loddon Primary Care Partnership, 2012).

Aims and Strategies of the BEP

The BEP aimed to improve student educational outcomes by ensuring:

- Substantial improvement in student attendance in Years 7–10 and retention from Years 7–12;
- Significant increase in the range of subjects available to students in Years 9–10;
- All students, particularly high-achieving students were extended in their studies;
- Improved student engagement and interest in subjects, particularly for average and low-achieving students, and those from lower socio-economic backgrounds;
- Improved teaching methods, classroom management, discipline and wellbeing of students.

Three main strategies were enacted to achieve these aims: redesigning school settings, developing teachers' professional learning, and personalising learning

through a differentiated, stage-based curriculum. These strategies are consistent with extensive research on improving schools with high concentrations of low SES students through focusing on student learning, high expectations of students, and instructional leadership (Muijs, Harris, Chapman, Stoll, & Russ, 2004).

Strategy One: Redesigning School Settings

Drawing on Nair (2005), the new schools included large flexible spaces to allow teams of teachers to work with up to 125 students at a time, where each school consisted of four self-contained learning communities, each with two learning neighbourhoods. This up-scaling of the traditional classroom community of 30 students to groups of 150–250 was based on a belief that a radical change was needed to improve students' experience of schooling. The BEP designers drew on Dunbar's (1993) anthropological claim that an optimal community size of 250 people could build meaningful personal relationships. Therefore the proposed design of learning communities aimed to maximise student access to a supportive learning context where students established meaningful relationships with other community members. Every student was expected to learn how to be an active, integrated member of that community. Students would be free to interact with a larger group of teachers and students than in traditional classrooms, facilitating more informal learning. Spaces were designed to accommodate multiple users and multiple purposes concurrently and consecutively, with use of formal and informal furniture pointing to possible varied usage. In the smaller learning neighbourhoods, ICT access was intended to be ubiquitous, movable furniture would further enhance usage and support flexibility. The buildings were also designed to integrate previously discrete functions, so that eating areas and formal/informal areas supported sharing/learning throughout the school day. Design features and functions aimed to optimise staff/student relationships, with open staff rooms, visual links between all areas, and minimal exclusion zones. These changes were intended to personalise student learning and wellbeing because of increased informality in staff/student interactions, and increased scope for teams of teachers to identify and address diverse student needs and capabilities.

In 2013 the four schools varied in size from 500 to 1200 students, and in design details of their four communities (Prain et al., 2014). The following diagram (Figure 1.1) represents an initial blueprint of how these principles were translated into one learning community's design in a school with a total student population of 600. The design aimed to accommodate 150 students and seven community-based teachers as well as visiting teachers for specialist subjects, such as language learning. The design included a welcoming open foyer area (the Einstein area), and the total space of the community was expected to provide flexible settings and opportunities for formal and informal learning. These included not only the large open-space areas for learning neighbourhoods, but also smaller spaces, such as a Socratic studio with its traditional closed classroom space, the Da Vinci

science/art studio for specific subject studies, and smaller interview rooms for group-work and meetings. Staffrooms are open areas attached to Learning Neighbourhoods. Each school site also had new technology and performing arts buildings as separate complementary learning areas, but we focus in this book on student learning in the learning communities.

The listed activities in the open areas point to vague, aspirational design aspects, and do not specify precisely the relationship between the types of seating layout and intended activities. The regimentation of seating layout in some areas points to traditional models of the classroom as a mini-auditorium where learning is focused through a teacher using a whiteboard, while other areas are presented as informal learning opportunities. The conceptual or practical justification for this division of space usage, and transitions between kinds of usage, were left tacit, or for teacher experimentation. The prescription that art and science classes share the same space represented a significant break with traditional practices, and implied capacity for professional collaboration and learning by teachers in each subject. Communities were also designed to promote potential sharing of facilities with local communities and to create environments that prompted more learner freedom and creativity. However, these early templates assumed that questions of syllabus structure, student transitions between activities, protocols for student behaviour, and expectations of student roles could be easily established through a combination of ‘open’ and ‘closed’ spaces, and shared perspectives by all participants.

Our research (Prain et al., 2014) indicated that these new up-scaled learning communities posed many challenges for teachers and students. Principals and teachers experimented with various options around organising time and space. Some



Figure 1.1. Proposed design of a learning community

communities were structured into multi-age groupings of Years 7 to 10 students where teachers and students belong to the community over four years, while others were structured into year-level communities. Lesson lengths in communities were a focus of experimentation, with lessons lasting from 35 to 120 minutes. Most schools decided eventually that 70-minute lessons were the most practicable in terms of lesson goals and effective transitions between lessons. Initial challenges included: addressing raised noise levels and student distraction; time-wasting during lesson transitions and changes to seating arrangements; developing effective community and distributed leadership; developing teacher teamwork; productive synchronised decision-making about space use; establishing student behaviour protocols; and actual and desirable teacher and student spheres of influence (Prain et al., 2014).

Strategy Two: Developing Teachers' Professional Learning

In addressing improved teacher effectiveness, the BEP designers drew on a range of prescriptions including those by Bransford et al. (2000), Elmore (1996), Brandt (1998), Danielson (1996), Schlechty (1997), and Wiggins and McTighe (1998). For Bransford et al. (2000), teachers needed to draw out and work with students' prior and current understandings, teach some subject matter in depth, using many examples to show multiple applications of the same concept, and integrate the teaching of metacognitive skills into the curriculum. Following Elmore (1996), teachers needed to work in teams where they observed, discussed and provided feedback on their own practices to lead to peer-coaching and problem-solving. Drawing on Brandt (1998), Danielson (1996), Schlechty (1997), and Wiggins and McTighe (1998), the BEP designers claimed expert teaching focused on disciplinary understanding, where students wrestle with profound ideas, use what they learn in meaningful ways, and where teachers guide students to organise and make sense of what they are learning and its connection to the wider world. Following Harpaz (2005), the BEP proposed that effective teaching and learning is characterised by fertile questions, intrinsic motivation, an environment that promotes active dialogue and communication, authentic problem-solving, informed feedback to teachers and learners, and rich, positive unconditional relationships.

Many strategies to support teacher growth in expertise were implemented during the three years of the study, including regular monthly professional support for teachers from consultants on curriculum design, effective pedagogy, and informed review of teaching processes. Subject teachers across schools worked to devise a shared curriculum in literacy and mathematics (Prain et al., 2014). Many teachers reported high levels of informal and incidental learning from working together with colleagues in team-teaching in the new settings (Prain et al., 2014). Challenges included initial staff turnover as some staff reacted negatively to the new roles and a sense of exposure in the new settings. These settings also revealed varying degrees of teacher professional capacity to adapt to the challenges of these settings (Prain et al., 2014).

Strategy Three: Personalising Learning through a Differentiated, Stage-Based Curriculum

Drawing on Tomlinson (2005), Seaton (2002) and others, the BEP designers claimed that personalising student learning entailed teachers designing and enacting a stage-based curriculum with appropriate task differentiation. For Tomlinson (2005), teachers differentiated a curriculum by varying student task demands, the pace and type of learning experiences, and/or the forms of assessment. This cast personalising learning as a predominantly teacher-directed approach to academic learning. The BEP designers also noted the need for strong positive relationships between teachers and students. Students needed to feel closely connected to teachers. The BEP proposed teacher advisor groups, where an individual teacher was responsible for the academic progress and personal welfare of 16–20 students. In this view, quality learning was possible when academic, social, cultural and personal developmental needs and capabilities were addressed, as suggested by Fielding (2004), Rogers (2013) and others. The BEP also claimed that an effective curriculum addresses student perspectives and learning styles, where students participate in negotiating aspects of content, modes of learning and assessment, and where a variety of progression pathways were available to all students. Following Seaton (2002), the BEP claimed that an effective middle years curriculum entailed focused learning, trans-disciplinary investigations, community development activities, and personal learning projects.

In characterising how such curricula might be achieved, the BEP (2005, p. 18) argued that students should participate in planning and evaluating instruction, and where “experimentation and experience...become the basis for learning experiences.” Following Kubow and Kinney (2004), the BEP writers noted that this required a more democratic approach to learning. Students should participate actively, self-assess their efforts, set goals and reflect on learning outcomes, leading to strategic gains in new learning tasks. In place of the traditional structuring of the curriculum (fixed syllabi, age-based education, annual student progressions, and one teacher a class), the BEP proposed that the new learning communities entailed teaching teams that customised learning experiences to promote individual student progress and wellbeing. Challenges included: some teacher lack of confidence and/or willingness to take on teacher advisor roles; and perceived lack of time and expertise for teachers to develop a robust vertical curriculum that catered for all students’ academic capabilities and wellbeing needs (Prain et al., 2014). In subsequent chapters we focus on strategies that enabled these challenges to be addressed successfully.

Overview of Participant Schools

The four BEP Years 7–10 colleges Whirrakee, Ironbark, Melaleuca, and Grevillea that form the basis for our study have varying populations and cultures. While they

are broadly similar in physical design in that they incorporate flexible open spaces and break-out areas, they vary in learning community organisation. These differences are briefly outlined here and summarised in [Table 1.1](#) (see Prain et al., 2014).

Whirrakee College, the largest of the four schools (over 1000 students in 2013), is the least disadvantaged, being classified as of average socio-economic status (SES) with a proportion of 24% of students coming from the lowest SES quartile, approximately half of the other three schools, while the proportion of students coming from the highest SES quartile is higher than the other three schools combined. Whirrakee College's focus is on student personal growth for social responsibility where students are developed into ethical citizens capable of contributing to the broader society. This focus is consistent with the school culture of emphasising academic excellence and a strong belief in the need for students to develop as independent and resilient learners in their four years at the school. Independence is encouraged from Year 7 as all students are responsible for keeping track of their attendance, learning tasks, and progress via a virtual dashboard on their personal computers. The learning communities are horizontally organised into year levels with a triadic system of student grouping. Three teachers teach 75 students in the open space, in three groups based on ability, for the core subjects of English, mathematics, science and humanities.

Ironbark College is the smallest of the four schools with fewer than 600 students in 2013. It is also the most disadvantaged school being classified as below average SES with a proportion of 57% of its students in the lowest SES quartile and only 3% in the highest SES quartile. The school is very closely connected to its broader community and has a culture of supporting its student cohort through an emphasis on respect for self, others and the school. Recognising the great need for student social and emotional learning that underpins academic success, the school takes a whole-school approach to student wellbeing that begins with a strong and well-conceived teacher advisor program. Communities are organised vertically into Years 7–10 groups and each community has two learning neighbourhoods, one comprising the Years 7 and 8 students, and the other comprising the Years 9 and 10 students. Students remain in one community with largely the same group of teachers throughout the four years of secondary schooling. This connectedness to a small community is seen by teachers as vital for introducing stage-based learning as envisaged by the BEP, and allows cross-fertilisation of culture and ideas among older and younger students.

Grevillea College is also a small school with a cohort of just over 600 students in 2013. Its priority, to foster students' personal attributes as a basis for academic success, is regarded as particularly important for its low SES cohort. Only 6% come from the highest SES quartile, and 48% of Grevillea's students come from the lowest SES quartile. Learning communities are vertically organised and each learning community has two neighbourhoods, each with a cohort of Years 7–10 students. The neighbourhoods form the basis for teacher advisor groups, and special subjects designed to develop student resilience, wellbeing, leadership and connections with same-age peers and the wider community. Students remain in one community

Table 1.1. Organisational differences among schools

	<i>Whirrakee</i>	<i>Ironbark</i>	<i>Melaleuca</i>	<i>Grevillea</i>
Students (2013)	Over 1000	About 600	Over 800	About 600
Staff/Student Ratio (2013)	16.0	10.0	13.0	13.0
SE Level (JCSEA value for 2013)	Average	Below average	Below average	Below average
SE Distribution in lowest half	55%	86%	76%	78%
Community Organisation	Each community houses one year level (Years 7, 8, 9 and 10 buildings). Students progress through the buildings as they move through their school years. Each year level has distinct teaching teams	Four community buildings, each of which houses a cohort of Years 7, 8, 9 and 10 students who remain in this community for their four years at the school.	Two learning community buildings house Years 7 and 8 students with separate communities for Years 9 and 10. Students progress through the buildings as they move through their school years. From 2014, change to Years 7 to 10 in each community	Four community buildings, each of which houses a cohort of Years 7, 8, 9 and 10 students who remain in this community for their four years at the school.
Domains where team-teaching and flexible groupings predominate	Maths, Science, Humanities, English	Maths, Science, Humanities, English	Maths, Science/Humanities (Transdisciplinary Inquiry), English, LOTE	Maths, Science, Humanities, English

through their four years at the school but may move between neighbourhoods. It is believed that this form of organisation allows modelling of behaviour and peer support from older to younger students. As teachers also remain in their communities from year to year, it is felt that the long-term relationships built among staff and students promote wellbeing and connectedness. Learning sessions are divided into four 70-minute classes per day and core subjects are blocked in each learning neighbourhood to enable stage-based learning. The College has a specialised trade-training centre which allows increased pathways for Years 9 and 10 students. Its outdoor area includes a centrally situated grass-covered hill, unique among the BEP colleges, which is a most popular social area where students gather out of class time.

Melaleuca College is the second largest of the BEP colleges with over 800 students in 2013. It has a strong focus on meeting each student's individual learning and wellbeing needs, moving from building a strong knowledge and skill base in Years 7 and 8 to increasing choice, independence and inquiry-based learning at Years 9 and 10. Like Ironbark and Grevillea it is classified as a school of below average SES, with 45% of its students in the lowest SES quartile and only 6% in the highest SES quartile. Like Grevillea, the school has a well-equipped trade-training centre to cater for student needs. The school has experienced much change in the period of our study. As well as high staff turnover and leadership changes, the organisation of communities has also gone through several iterations, moving from combined Year 7 and 8 communities and separate Year 9 and 10 communities, to horizontally organised year-level communities, to the current organisation of vertical Years 7–10 communities. At Melaleuca, personalisation of learning has been built into the assessment design as well as community and timetable structures. In core subjects, three classes of the same subject are scheduled at the same time in the same space, affording opportunities for teacher collaboration and planning in a range of subjects.

Our Analyses and Research Methods

In analysing the BEP's goals, strategies and outcomes, we drew on multi-theoretic perspectives to interpret teacher and student adaptation. Guided by Cultural Historical Activity Theory (CHAT) perspectives (Edwards, 2005, 2011) we understood continuity and change in cultural practices including schooling/teaching/learning in terms of the values, goals and material/symbolic tools participants used in these practices. We also drew on pragmatist perspectives on the situated and contextual nature of teacher problem-solving, reasoning, knowledge generation, values clarification and meaning-making (Dewey, 1916; Haack, 2004; Peirce, 1931–58; Wittgenstein, 1972). From these viewpoints, what personalising learning means depends on analysing the goals, values, strategies and outcomes that occur in its name in this context. We understand a pragmatist orientation to be a systematic method of inquiry that avoids a priori judgements and incorporates a reasoned collective analysis of attempted personalising practices to identify justifiable beliefs about their effects. Rather than naming

decontextualised essential truths about personalising processes, we sought to identify justifiable rules for successful action in this particular setting. The new physical school settings were catalysts for change, unsettling teachers' habitual behaviour and perspectives on effective teaching and learning, causing them to reflect and experiment with a range of new options judged by their practicability in enabling meaningful student learning. We also drew on Gibson's (1979) ecological psychological perspective to explain teacher and student adaptive actions and rationales.

In defining these adaptive practices we analysed (a) accounts in the relevant literature by advocates and critics of the rationale, goals, methods, and outcomes for personalising learning, (b) the perspectives and practices of participant teachers and students in our study, and (c) learning outcomes for both students and teachers. As already reported (Prain et al., 2014), we developed a new instrument to assess student perceptions of a personalised learning environment, and conducted an annual survey over three years with the student cohort. We report the findings of this survey in subsequent chapters to corroborate themes. Through case studies in various subjects across different schools, entailing qualitative and quantitative data analyses, and drawing on relevant literature, we aimed to identify and explain key conditions and practices that enabled quality student personalised learning and wellbeing in these contexts.

Our understanding of these adaptive practices has been influenced not only by teacher/teacher and teacher/student collaboration and partnerships in these settings, but also by applying Gibson's account of affordances to explain these changes. In this sense our pragmatist approach aims to take into account how the values, intentions, beliefs and practices of participants interacted with the symbolic and material structures/tools in the setting. We saw this interaction as critical to understanding and assessing adaptive processes and outcomes. According to Gibson (1979, p. 128), affordances are "action possibilities" latent in the environment, objectively measurable, and independent of the ability to recognise them, but always available in relation to the actors' intentions and therefore dependent on their capabilities. For us, these environments offer new possibilities for how curricula can be imagined and enacted. Whether teachers feel empowered or constrained by increased visibility in up-scaled learning communities, with larger spaces and reduced formal spatial structures, depends on how they interpret and respond to these aspects. Whether they view this as a chance to extend their sphere of influence, to participate in productive informal teamwork with colleagues, and to learn from others' practices, or as an intrusion and/or distraction, depends on their perceptions of how these affordances enable or constrain their aims and practices as teachers. As we have noted elsewhere (Prain et al., 2014), adaptive change can be prompted by dissatisfaction with past ineffective practices, whole-school support for change, innovative initiatives from individual teachers, and cross-school teacher collaboration.

Conceptualising Personalising Learning

Researchers generally agree that personalising learning is understood as a practical way to increase students' sense of learning as individually engaging and meaningful (see Prain et al., 2014 for extended review). Personalised learning thus entails processes around quality learning, raising larger questions about the ultimate purposes of school-based education in terms of learner knowledge, attributes and values. Personalising learning is based on the principle that students have rights and capacities as learners for self-realisation/self-actualisation that can be addressed by flexible approaches to curricular structure and developmental sequences, thus reducing constraints/hindrances/blockers implied by assuming student abilities and needs are best addressed through standardised age-based curricula. The grounds for enacting personalised learning are based on the assumption that teachers and students are able to co- and self-regulate learning through shared decisions around roles, practices, values, and mutual responsibilities. Our view of personalising learning is therefore not based on a principle of unfettered student freedom and unconstrained deliberative choice, but rather one of productive constraint on student focus and activity.

As pragmatists, our inquiry focuses on the particular features of the regional and school priorities and contexts to address the issue of what personalising learning means under these conditions. We recognise that engagement and meaningfulness as curricular effects pose heightened challenges for teaching low SES students, who are often alienated from schooling. What learners find meaningful can be prompted by learner and teacher intentions and strategies, and vary over time. Our inquiry therefore entailed resolving practical questions assumed to have identifiable causes in these contexts, and where knowledge about personalising learning is generated through dialogue with participants, and in logical proof. Our accounts of successful personalising of learning across the curriculum, as reported in subsequent chapters in this book, are therefore highly context-dependent. However, our research also provides leads for enacting personalising learning in other settings.

We claim that learning is personalised when learners are motivated to learn because they view the learning task or experience as engaging and meaningful, and as directly addressing immediate and/or longer-term learning needs. Motivation may be intrinsic, extrinsic or both (see Dweck, 2000). Both kinds of motivation occur concurrently or sequentially and contribute to personalising learning. Learners are best placed to judge the extent to which they perceive their learning as personalised, but this process also leaves scope for teachers to make informed judgements. For their part, teachers contribute to learner perceptions and experiences through designing curricular tasks and activities, motivating students, providing targeted teaching and timely feedback, and, where appropriate, negotiating with students their goals, tasks, and performance evaluation. Students over time are expected to develop self-reliance and initiative as learners. The teaching experience is personalised for teachers when their energy and flair provide meaningful learning experiences for their students.

This account raises further questions about what enables learner perceptions of meaningfulness, what exactly counts as meaningful and why, what responsibilities are, or should be, distributed between teachers and students, and who should shape curricular content and methods. Our case studies in subsequent chapters flesh out detailed answers to these questions, but here we summarise key aspects of our reasoning.

On the question of what contributes to student perceptions of meaningful learning, we recognise crucial complementary insights from pedagogical, cognitive, socio-cultural, and psychological perspectives. From pedagogical perspectives (Moje, 2007), a robust mainstream curriculum includes opportunities to differentiate what, how, when, why, with whom, and at what pace students learn, and is likely to be perceived as more engaging and meaningful than a standardised curriculum. This is especially the case where there is a wide student ability range. Learning is likely to be meaningful when there is a good fit between individual learner needs, interests, capacities, and the demands or level of the learning activities. This implies that a well-designed and differentiated curriculum increases the likelihood of student motivation.

From cognitive perspectives, learning is meaningful when learners self-regulate their learning (Pintrich & de Groot, 1990). This entails constructive and intentional use of personal strategies to achieve academic and wellbeing goals (Boekaerts & Corno, 2005; Butler & Winne, 1995). Pintrich's (2004) widely adopted model of self-regulated learning (SRL) involves: (a) forethought, planning and activation (planning and enacting behaviour such as effort and persistence); (b) monitoring (such as tracking task requirements); (c) control (such as adapting behavioural strategies to ensure task completion); and (d) reflection (such as use of self-assessing strategies achieve task requirements). For Zimmerman (2008), independent learning or self-regulated learning refers to the degree to which students are metacognitively, motivationally and behaviourally active participants in their own learning processes. Learning is likely to be personalised and meaningful when students know and use a repertoire of such strategies. We acknowledge that self-regulation is developmental, and that teacher co-regulation of learning experiences enables this development. We also agree that learning can be personally meaningful when students with limited self-regulatory capacities are supported by this co-regulation. The crucial element is reflection-guided action leading to a sense of student learning achievement.

We also wish to clarify how we see the relationship between students' individual and collective experiences. For us, learning is personalised when it promotes in learners a sense of their individual capabilities and interests. However, we regard isolationist views of personalising learning, where programs are highly individuated, as misguided. Learners are likely to view their learning as personalised and meaningful through relational connections with peers, teachers and parents. From socio-cultural perspectives, meaningful learning for students depends on successful participation in culturally valued activities (Moje, 2007). The development of an

individual identity as a person, a student of a particular subject, a class member, a group participant, or a learning community member depends on productive relationships with others that enable individual and group goals and wellbeing to be integrated and enabled. This is evident when learners contribute to activities such as large- and small-group discussion, debates, academic and sporting teams, group projects, musical ensembles, school community decision-making, and teamwork around small or large school-based or broader community projects.

From psychological perspectives, learners perceive their learning as personalised if teachers demonstrate concern for and knowledge of students as individuals, and provide strategies to address particular academic and wellbeing needs (Hattie, 2009; Sugarman & Martin, 2011). An individual learner's sense of self and personhood depends on being valued individually and achieving recognition through personal achievement and through connection with others (Fielding, 2004; Sugarman & Martin, 2011). We argue that with low SES students, this achievement and sense of connection is enhanced by a focus on an explicit developmental curriculum around social and emotional learning to support students becoming active functional members of their learning community (see Chapter 10).

On the question of who should decide the curriculum, we argue that in the context of highly prescriptive national and state curricula and testing regimes in high-stakes subjects, teachers need to have a significant role in shaping how curricular content and goals are addressed. We argue, following Moje (2007), that a socially just curriculum provides access for all students to a quality mainstream curriculum, implying necessary productive constraint on both the content and appropriate teaching and learning methods. We reject the view that personalising learning is inevitably a misguided return to student-centred education from the 1960s (Hartley, 2009), although we claim there is scope in some subjects for more student initiative on curricular content and methods (Prain et al., 2014). Learning mathematics is more likely to depend on successful progression through topics/levels than learning in interest-based humanities and technical subjects. More contentiously, we argue that personalising learning is compatible with testing regimes in that such regimes provide an evidential starting point for curricular design, incorporating future curricular differentiation to address learner needs (see Chapter 7). At the same time, we recognise that student academic success is not the sole indicator that learning is personalised, and that students may succeed without attaching much personal meaning to their success. We think it preferable that students find their subject content deeply engaging, where teachers adapt the curriculum to meet student needs and interests.

On the ideological underpinnings of personalising learning, we disagree that this form of learning necessarily equates with neoliberal consumerism (Beach & Dovemark, 2009), or inevitably increases disadvantage for low SES students (Campbell et al., 2007; Cutler, Waine, & Brehony, 2007; Pykett, 2010). The ideological character of this approach emerges from its enactment rather than any