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12. REMAKING SCHOOLING THROUGH OPEN-PLAN SETTINGS

Some Conclusions and the Future

In assessing a major educational reform of the kind enacted in the BEP, many questions are raised, requiring comprehensive, evidence-based answers. Was the original Plan well-conceptualised and effectively enacted to meet the needs of these twenty-first century learners? What are the short-term and long-term effects of this major reorganisation of schooling? What are the gains and losses (if any) of this approach? To what extent were initial goals achieved, and enacted strategies effective, and why? How sustainable are the emerging signs of positive changes to student academic attainment and wellbeing? What are lessons for like contexts and future schooling? Elsewhere (Prain et al., 2014), we have sought to answer some of these questions around BEP goals, implementation strategies, and outcomes, including key enablers and constraints.

In this book we have focused on how widely acknowledged challenges facing participant and like schools (high concentrations of low SES students, ineffectual curricula, and poor levels of student engagement/attendance/wellbeing), have been addressed in the BEP (up-scaling learning communities and curricular renewal through teacher professional learning and team-teaching). Our account of this solution, (personalising learning in open-plan schools), and its effects, have been elaborated in the preceding chapters through case studies of new teacher and student practices in different subjects. More provocatively, we have viewed personalising learning as a proxy for quality learning processes, while also considering quality across the curriculum as entailing disciplinary propositional, procedural and dispositional knowledge, skills and value perspectives (as enshrined in official curricular policies and only partly measured in national testing regimes). As noted by Muijs, Harris, Chapman, Stoll, and Russ (2004), and many others, making learning personally meaningful for low SES students is fundamental to achieving quality learning as both process and outcome.

In this chapter we draw together these insights about the relationships between altered physical settings, teacher and student change, curricular renewal, and learning quality, and consider key implications for the BEP schools and other schools and

systems. We review the effects of the key BEP strategies, including (1) the open-plan settings as a catalyst for curricular change, (2) teacher professional learning, including the formal and informal development of 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 conclude by considering further questions and implications arising from this research for participant schools as well as for curriculum in education systems more generally.

The Open-Plan Settings as a Catalyst for Curricular Change

Past research on the relationship between physical settings and student learning has tended to be inconclusive about the impact of physical settings on learning gains or teacher practices (Hattie, 2009), or claimed the need for more research (Mahoney, Hextall, & Richardson, 2011). For Hattie (2009) past research on open-plan settings had not established a case for strong learning gains, and Mahoney, Hextall, and Richardson (2011) argued that the complex relationships between school physical settings and possible beneficial academic or wellbeing outcomes remained to be established. Our research into the BEP schools indicates there is a complex reciprocity between the new settings, curricular reform and organisational change, and that this reform/change can lead to improved academic attainment (as noted in Chapter 1) and increased wellbeing (Chapter 4). As indicated in the emergence of new teacher roles and practices (Chapter 2), and the synchronised team-teaching of English (Chapter 6) mathematics (Chapter 7), science (Chapter 8) and studio arts (Chapter 9), the new larger settings enabled teachers to experience and review past traditional curricular practices, note shortfalls or discrepancies across different instances of the same subject in their schools, and work together to envisage a richer vertical curriculum that could be team-taught to address all students' needs. This is not to argue for architectural determinism, where larger spaces ensured change, but rather to argue that the spaces provided an impetus for teachers to imagine and adapt new practices as practicable in these settings.

As we have reported elsewhere (Prain et al., 2014), not all teachers welcomed the increased exposure of their practice, or the new imperative of collegial cooperation. Some teachers left these schools. Others took up the opportunities for new roles and new in situ collegial teaching. For these teachers the new settings catalysed the need for curricular review and necessitated and encouraged reform. For some teachers, like Bob in science, (see Chapter 8) the teaching team affordances of the larger settings aligned with his prior beliefs about how to optimise student learning by enriching the teaching and learning resources and expertise available, whether actual or virtual. Other teachers were persuaded about the virtues of team-teaching and shared space through various influences. These included: dissatisfaction with past approaches, advocacy from colleagues, exposure to workable practices in their own community, or in other like settings and other schools, through informal learning

first-hand of the gains of an in situ collegial approach, or through recognising the need for new adaptive practices in these larger settings (see Prain et al., 2014). The case studies presented in earlier chapters in this book reflect, in some cases, two or more years of teacher exposure/adaptation to these settings, and various iterations of curricular and organisational experimentation and refinement.

As noted in Chapter 1, the teachers' initial exposure to the larger settings also foregrounded structural challenges around the organisation of daily life in each learning community. This entailed experimentation with block timetabling, and organising the distribution of staff expertise within and across communities. The larger spaces also dictated the necessity to establish student behaviour protocols for internal traffic, as well as movement in and out of communities. Staff members also had to establish protocols around organisation of furniture during and after lessons, noise levels within communities, and transitions between 'classes' (see Prain et al., 2014). All these challenges compelled a focus on school-wide teacher-imposed structures to enable productive constraint of student focus and activity as a basis for workable daily curricular experiences. In these ways, the larger settings prompted new expectations on daily routines, prompting new teaching and learning practices.

Our research into the BEP schools also supports Gislason's (2009, p. 4) claim that open-plan design fosters a "sense of community among students", depending, according to Gislason, on staff commitment to team-teaching in interdisciplinary subjects and willingness to collaborate in block-timetabled teaching. These strategies enable a productive intensification of curricular focus, resources, and expertise. As noted in Chapters 4, 7, 9, and 11, and in our research elsewhere (Prain et al., 2014), students in the new settings appreciated access to more teachers and students, and to an increased sense of participating as members of a supportive community. However, as noted by Boys (2011) the effective use of open or closed physical space for learning depends entirely on how participants understand their roles and purposes, pointing to the critical role of a quality curriculum as both content and teaching and learning processes in the open-plan settings. As evident in every case study in this book, personalising learning has entailed new challenges and opportunities and altered roles for teachers and students.

Teacher Professional Learning

We have reported elsewhere on the multiple sources for teacher professional learning in these settings, including from external curricular support as well as from colleagues (Prain et al., 2014). Here we synthesise insights from the preceding chapters about the emergence of teacher "common knowledge" (Edwards, 2014, p. 206) about effective professional practice in the open-plan settings. By "common knowledge", Edwards means a shared understanding of "what matters" (p. 206) for all participants, with this understanding then providing a resource through which collaboration and alignment of motives can be mediated, validated, and advanced. As noted in Chapter 2, through extensive experience in the new settings, teachers

sought to extend learning experiences from well-tested traditional practices, such as explicit instruction to a conventional ‘class’ of 25–30 students in a closed space, for example in the Socratic Studio, to more independent technology-mediated individual and group work in larger spaces. We theorise teacher adaptation to the new settings as a complex problem-solving process, characterised by the interplay of past practical knowledge, contextualised experience, experimentation, reflection, and feedback (Chapter 2). Subsequent chapters in our book instantiate some key principles in teachers’ practical reasoning about workable approaches to teaching and learning in these settings.

A recurrent theme across our case studies of different subjects is that teachers ‘want’ a manageable order to the curriculum in terms of their own and their students’ roles. Students, for their part, also want predictability and security in daily expectations (see Prain et al., 2014, Chapter 10). Teachers in our case studies aim to provide an enabling structure and focus for student learning but then expect and allow more student initiative in engaging with learning tasks. This expectation of increased freedom of student learning pathway arises, we speculate, partly from the governing educational orthodoxy that teachers should develop independent student learners (Akinsanmi, 2011; Ledward & Hirata, 2011), but also because the larger spaces provide workable enactments for diverse activity. In terms of the “division of labour” (Engestrom, 2000, p. 960) between teacher and student roles in teaching and learning, this “letting go” of tight teacher control of learning processes represents a plausible shift from the traditional tight managerial classroom role for teachers. This shift is evident in teacher expectations of increased student agency and independence as problem-solvers in the games-based learning program in Chapter 3, where students are expected to make full use of available actual and virtual resources. It is evident in the teacher expectation of flexible students’ problem-solving strategies and representational diversity in the mathematics programs (Chapter 7) the science case studies (Chapter 8), the English programs (Chapter 6), the studio arts program (Chapter 9), and the social science unit (Chapter 10). It is evident in the expectation that students will monitor, analyse, and self-manage their learning through use of a virtual dashboard in Chapter 5. In each case, the teachers provide or negotiate criteria for task success, offer timely coaching for groups and individuals as needed, and give precise feedback on student performance, but students are given some spatial and strategic freedom to tackle tasks.

This entails a significant shift from the role of teacher as deliverer of a tightly packaged program. As indicated by Edwards (2014, p. 208) in commenting on the BEP, the teacher is now charged with the dual role of creating a cultural environment where learners “move themselves forward”, but where teachers also “make demands on learners which ensure that in their sense-making they engage with publicly valued meanings”. This formulation nicely captures the balance in personalised learning between student freedom, initiative, and teacher productive constraint. This balance

is a key feature of how the sense-making of learning is personalised effectively in the case studies of different subjects reported earlier in our book. As noted in Chapter 5, this dual teacher role also applies to working with students as they make sense of (and act upon) assessment of their work as recorded on the Whirrakee dashboard. Students' private individual sense-making and learning strategies need to feed into discussion/feedback with teachers to develop a shared public understanding (language) about what enables quality reflection and informed action.

Complementing this common knowledge between teachers and students, teachers also build a common knowledge around the strengths of colleagues as contributors to team-teaching, as shown in the English, science and studio arts cases, where teachers aim to complement areas of expertise. Common knowledge also entails distributed expertise, where subject teachers, such as in the mathematics and science case studies, develop multi-level understandings of key underpinning concepts and content appropriate for a wide student ability range. Common knowledge further includes a shared understanding of an individual teacher's sphere of influence with students in relation to both teacher advisor groups and subject areas. Common knowledge also includes shared understandings and contributions to the curriculum in each subject, as demonstrated in the mathematics case study, where the curriculum functions for teachers as a collaborative tool.

Processes for sharing knowledge include planning, enactment and review meetings to monitor constructed boundaries (syllabi, subject choices, team-mixes, community leadership within and across communities) to ensure these structures continue to serve shared long-term goals. While some decisions are appropriately made by staff alone, such as the staffing-profile mix, other decisions can entail student input and negotiation around the design, enactment, and review of teaching and learning goals, methods, processes, and space usage (see Prain et al., 2014).

At Waratah College, where only a few classes were taught in open-plan settings, staff also developed a common knowledge around new practices. Teachers reported that the team processes facilitated shared understanding of what quality teaching and learning could mean and the role of assessment in these processes. It caused the year-level teachers to think more about the qualities of good teaching, how to monitor learning, and how to share ideas and support each other. Teachers felt it was important for students to know that their teachers had a common goal. They now felt that it was important that this shared understanding and knowledge was developed, so that students would take on a positive view of learning processes, and recognise that success was expected of all students. As the year-level coordinator put it, "It is too important not for us to take advantage of the changes to improve student learning". Another teacher noted, "we have focused on building collaborative teams. We analyse data. We collaboratively plan together. We are all active participants. We are trying to build a teach-the-team model. We have come a long way. It becomes a default behavior for students to talk about their own learning".

Curricular Reform Leading to a More Explicit, Differentiated Curriculum

As claimed in Chapter 1, the open-plan settings enable personalised learning and student wellbeing, provided they function as supportive communities where teams of teachers address learners' individual and collective academic and wellbeing needs. Our case studies of academic subjects point to mutual responsibility, the cooperative synchronicity, and the improvised flair and creativity of individual teachers as they worked in teams to enact the curriculum. The primary affordance of shared space, mutual visibility, and flexible, multiple teacher roles enabled secondary affordances, such as (a) increased informal learning, as in skyping and blogs between scientists and Year 8 science students, (b) impromptu/formalised mini-class problem-solving sessions, as in mathematics, science, English and studio arts, (c) space for students to work individually or in groups within or beyond a learning community, or rehearse and refine presentations, as in the English case studies, (d) scope for targeted challenges for the least and most able students, as in the mathematics and English case studies, and (e) changes to assessment processes and student roles, as in the social studies program.

We view the explicit developmental personal curriculum of the teacher advisor program (Chapter 11) as a crucial complementary support to the effectiveness of ongoing staff-student relationships in learning communities and the sustained promotion of student wellbeing. This critical role in building supportive communities for all learners is evident in teacher and student feedback on this curriculum (Prain et al., 2014, Chapter 10), and is particularly needed to engage low SES students.

The case studies of different curricular areas highlight similarities and differences in the challenges of creating effective differentiation of student learning. Our case studies point to the need for a connected sequence of cumulative challenges. However, subjects such as mathematics and science are more tightly sequenced in terms of concept development and connected or chained understandings of the big ideas or processes in each field. This potentially makes it easier to provide a fine-grain approach to monitoring student progress. By contrast, subjects such as English, studio arts, social studies/humanities and the teacher advisors' personal development curriculum are more loosely defined in terms of evaluating precise evidence of student attainment and progress. This points to the need for a robust shared sense of evaluative interpretation by teachers in these fields as well as the need for stimulating rich learning tasks, of the kind evident in the English and social studies/humanities programs. Such tasks are likely to flesh out specific characteristics of different levels of student attainment that can become a collective resource for future assessment practices and also a guide for future students. The nature of the personal development program implies the need for teacher sensitivity and flexibility in dealing with planned and unplanned issues that may not be easily 'sequenced' developmentally across four years of schooling. The result, noted by teachers in disciplinary teams, is that a team-taught vertical curriculum is always evolving via teacher and student input, and should be constantly open to new tasks,

and reviewed to check the efficacy and trajectory of learning experiences realised in each domain.

Some Further Questions around Personalisation of the Curriculum

The BEP aimed to replace an age-based curriculum with a stage-based one, but as we noted elsewhere (Prain et al., 2014), this radical change to student learning trajectories has only been partially achieved, with some subjects operating across two age levels, such as Years 7–8 and 9–10. Constraints on more thorough personalisation of student goals and progress include challenges around teacher expertise and resourcing of subject areas in learning communities, and a teacher belief in the socialisation benefits of students having extended schooling experiences with students their own age and at the same general level of social development. At the same time, as noted in the intended changes to the Dashboard at Whirrakee College, some schools are looking at extending the scope for a curriculum that students can customise deeply to suit their developing abilities, goals, and interests. It will be a significant challenge for each school to extend student options in this regard, but the open-plan settings do not block such possibilities.

Curriculum personalisation also raises the question of the evolving role of student voice in the design, enactment, and review of learning goals and experiences in the BEP schools. Again, as noted in the studio arts case study and in various strategies already implemented to include student consultation and empowerment on these matters (see Prain et al., 2014), the schools are shifting from a traditional division of roles on this question. How quickly or slowly this shift will occur remains an open question, but we would suggest that the increased informality created in the open-plan settings is a positive influence on teachers recognising the necessity to incorporate student voice and agency into the curriculum, especially with more senior students who have experienced three years in the learning communities. Where a strong community-building focus has been established in a learning community, then there is considerable scope to expand student agency into all aspects of the community's life.

A further question is whether the new open-plan settings suit all learners. As noted often in this book, the settings presuppose learners who are comfortable in larger communities than classrooms, who can thrive on daily opportunities for access to multiple teachers and many students, and who welcome/take on more self-reliant and self-initiating attributes as learners. The preliminary finding that boys were slightly more positive than girls about these new settings (Chapter 4) needs to be researched further to identify underlying influences on both group's responses, and possible changes to enhance wellbeing for all students. Teachers in all the schools have also been concerned about the potential for distraction and discomfort for some students with particular needs who do not fit the implied assumptions about student capabilities or preferences in these settings. Various strategies have been put in place to address these concerns, including student withdrawal to more traditional enclosed

settings, or opportunities for students to work independently from groups in various break-out areas in each school. Again, this remains an open question about the extent to which these schools, like traditional schools, effectively accommodate the needs of all students.

Our study also sheds light on the question of how curriculum differentiation by teachers relates to students experiencing their learning as personalised. As noted in earlier chapters, we argue that teachers can differentiate some or all of the following components of learning to suit individual student needs: curricular goals, learning tasks, resources, learning sequences, and feedback. In this way teachers contribute to students finding curricular experiences more personalised through targeted approaches to their needs and capabilities. However, over time students can also develop increasing independence around topic choices and learning processes and thus personalise their learning further. In this way, curricular differentiation is a teacher-regulated strategy that can provide the foundations for increased student self-regulation of learning, leading to more personalised goals, processes and learning outcomes.

Concluding Remarks

We have learnt much from our research into the BEP about personalising learning. At the risk of offering a reductive analogy, we consider that the teacher's role in these new settings is like being a driving instructor. When teaching young people to drive, you do not spend the majority of time in the driver's seat, making the learners watch and listen (although adequate preparation is required). You sit beside them, leaving them in charge of the car, responsible for changing gears, steering, braking and accelerating. Certainly, you are there to guide and support them. You have expertise and if necessary you will apply the spare set of brakes or grab the steering wheel, but you only take over in an emergency because your ultimate goal is that they will learn to be an independent, competent, considerate, safe, and highly skilled driver. Clearly, quality learning at school entails larger challenges than learning to drive, and includes creative risk-taking, and informed insights into personal preferences, intentions, and strengths and weaknesses, and sustained effort. However, the driving analogy points to key dimensions around trust, guided opportunities, and practical conditions for enacting personalised approaches to student learning.

We consider that the creation of the case-study practices reported in our book represents a major achievement in establishing new and more engaging ways for low SES students to experience school curricula and to connect to schooling. We are fully aware that these successes were hard-won, in the face of many challenges and obstacles. These include initial teacher and parent resistance to new practices, dangers of teacher burnout in the new intensification of teacher work in these settings, and turnover of staff and leadership. Teachers have needed to learn new understandings and practices around being agile educators in these settings, as have students in being co-learners in new up-scaled classrooms. On balance, for

all the reasons covered in this book, we consider that the new settings represent important gains over traditional schooling, especially for low SES students, in terms of improved learning and belonging. We fully recognise that in establishing this new form of schooling, teachers initially had greatly increased demands on their time, expertise, creativity, and willpower. However, we argue that these demands decrease as a rich curriculum is built, shared, refined, and elaborated by all participants. While there is extensive rhetoric about how twenty-first century learners need to develop as independent, creative, critical, problem-solving team-players, who excel at communication, our research on the strategies (and effects on participants) of the BEP indicate practicable ways to achieve these outcomes for these students, and other like cohorts.

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