Anticipating the future: professional practices to support a new education paradigm

Background

This paper was prepared following the conduct of an invitational symposium by AITSL in Melbourne on 4 March, 2013. The symposium was entitled *Anticipating the future: professional practices to support a new education paradigm*. Participants included representatives of education systems, sectors and professional organisations from across Australia, several international contributors, academics, and representatives of agencies that comprise the national education infrastructure.

The Chair of AITSL, Mr Tony Mackay, made clear in his introduction that the symposium had a number of broad purposes:

- to engage in open discussion about how the professional practices of teachers and school leaders need to change if they are to be effective in and contribute to a new education paradigm;
- to build a shared sense of the requirements for change in teaching practice for Australia;
- to start a process of reaching agreement on a set of core beliefs about learning and teaching; and
- to identify those professional practices that could form a basis for further exploration and discussion.

Mr Mackay noted that there were already in place valuable national partnerships and an institutional infrastructure that could support change, and that progress had been made in the various jurisdictions and sectors across Australia. The task was not to replicate existing initiatives, but to make the most valuable elements of a new paradigm nationally powerful and accessible.

Purpose and limitations

This paper summarises key issues raised at the symposium and proposes an initial view about areas in which AITSL could help advance the national conversation about professional practices to support a new educational paradigm. The paper seeks both to synthesise the discussion at the symposium and to elaborate and extend that discussion where that approach assists in understanding the underlying issues.

Symposium participants generated a substantial body of ideas about learning, teaching and schools. These were not all consistent with each other and involved some overlapping categories. The discussion in this paper summarises and organizes the participant contributions under headings and in a form intended to make their relationships more evident.

The environment for education

Valerie Hannon, a Director and consultant with the Innovation Unit, an independent social enterprise in the United Kingdom, described a series of major changes in the environment for education and the conditions under which it is being conducted. This set of issues was taken up to some extent by other participants. It is not discussed at length in this paper, in part because it is relatively widely understood and in part because the focus of the discussion was the practice of the classroom and the school rather than the conditions that have led us to this point. In summary, the major matters raised were:

- technology and globalisation;
- the environment at a critical point;
- globalised economies in flux, and mutually affecting each other;
- demographic issues, including the rapid growth in the proportion of older citizens;
- rapid and unsustainable growth; and
- new biological, biogenetic, biochemical, genetic and materials technologies that are enabling us to seize active control over evolution.

What kind of exit student?

One matter discussed consistently throughout the symposium concerned the kind of student we hope will graduate from our schools. There was a strong sense throughout that a vision of student capacity should drive our reform efforts, as it does the Melbourne Declaration. It is assumed here that the definition of a new paradigm is to a large extent a function of the ambitions we have for our children and the benefit we want them to gain from their education.

This issue was crystallised early in the discussion by Valerie Hannon. Ms Hannon set out a challenging view of the capacities we might expect for our students. Drawing on and re-thinking a *Times Educational* Supplement survey of teachers, she suggested that among the characteristics of students should be ***passion for and engagement in learning***, curiosity and imagination that ensure that young people acquire, match and update skills

A number of speakers spoke about the capacity of students to ***make decisions and take responsibility***. Alice Leung, in describing her own practice, suggested she was looking for students to do things for themselves, monitor their own work and know when it is good. Bianca Hewes agreed that a core goal was the development of self-directed, active learners, while John Goh suggested that self-regulation was a 21st century skill. Valerie Hannon argued that capacity for confident, independent decision-making and an orientation to generating solutions were essential characteristics.

This could not be achieved unless ***students understand their own learning***. Bianca Hewes suggested that students need a metalanguage for talking about their learning. John Goh argued that children should be able to say what they have learned and what they would like to learn next. Alice Leung

similarly said that a key intention was that young people understand their own learning.

A number of speakers discussed the transition in students **from consumption to production** roles. Patrick Griffin identified a series of desirable shifts from consumer to producer of social capital to producer of intellectual capital. Valerie Hannon argued that students should be engaged in the production of knowledge.

Alice Leung discussed the need for students to possess ***Cultural knowledge and intercultural understanding*****.** Others also saw these as core. Valerie Hannon reported on a *Times Education Supplement* reporting a survey of teacher views, one of which was that students should be open to different cultures and different worlds.

Alice Leung suggested that students need the capacity to ***adapt to change***. Others, including Valerie Hannon, argued that ***resilience*** was a critical characteristic.

There was a strong emphasis on ***values and social responsibility***. Patrick Griffin argued that the foundations for contemporary education should include knowledge, skills, attitudes, values and ethics. Valerie Hannon looked for students with energy, humanity and an interest in the creation of a better world. Bianca Hewes argued that ethical responsibility is a key 21st century capability.

Valerie Hannon also articulated a related criterion, arguing that students should be enthusiastic about ***creating possibilities*** rather than simply reacting to existing problems. This forward-looking generative capacity was a key characteristic of innovation and of a new educational paradigm.

Changes required in teacher practice

If schooling is to contribute to the development of student characteristics of the kinds discussed, there will be implications for the role of teachers. There was a consistent view across the symposium that teachers are the key element of change. Several group discussions referred to the importance of ***teachers and teaching as key factors in learning***. One group suggested that it was essential to recognise that teachers make a difference. Another argued that it was possible to identify good pedagogy and it should not be left to chance.

There was also, however, a view that practice still had a long way to go to meet the demands of the Melbourne Declaration, let alone an even more ambitious new paradigm. Speakers at the symposium argued the case for a range of different changes needed in teacher practice. While these were advanced on the basis of different conceptual frameworks, the core issues discussed demonstrated some degree of commonality. They have been grouped (somewhat uneasily in some cases) as a step towards identifying a

shared basis for further action. The categories below are not claimed to be links between entirely like ideas; rather they mark out territory in which the symposium speakers and participants expressed interest, though often from different perspectives or with different underlying values.

Several speakers were concerned about ***establishing the conditions for learning***. Margot Foster proposed that teachers had to create safe conditions for rigorous learning. Alice Leung indicated the need to teach the skills of collaboration, leadership and time-management to enable effective involvement in more self-regulated learning. A number of participants argued that school leaders had a critical role in establishing conditions under which teachers could explore new ideas and expand their practice.

The symposium focused extensively on approaches to ***student engagement in powerful learning***. Valerie Hannon argued for project based learning as a valuable basis for authentic student engagement, though not as a panacea. In outline, the key elements are engagement with a powerful question that seems important to the learner; a process of drafting and redrafting; exposure to critique; and public exhibition of the outcomes of the process. One consequence of approaches like this should be a significantly wider set of student learning outcomes than those that drive much contemporary schooling. Jenny Gore argued that the research demonstrated that students do better with intellectually challenging and engaging tasks.

The notion of powerful learning was linked with ***high expectations***. There was a focus on high expectations for all students and, by extension, all teachers. One group suggested that they should apply to both students and teachers. Another suggested the importance of stretching the growth of both teachers and students.

This was related to the view of one group that expectations of both teachers and students should be ***evidence-based***. Another group argued for innovation that was practical and for which evidence of effectiveness was available.

There was a shared interest in ***learning relationships.*** Valerie Hannon discussed extended learning relationships that draw others into student learning rather than seeing it as either a one-to-one matter between teacher and student, or a function of screen-based personalized processes. This will involve establishing strong and productive relationships taking a wide range of forms (e.g. coach, mentor, expert, peer, tutor) to stimulate, shape, encourage and guide learning. It will also involve engagement with the community, including the school community and community organisations.

A view regularly articulated in different forms could be summarised as ***shared responsibility for learning***. One group argued that learning is everyone's responsibility. Another suggested that broadening the ownership of learning was important. A third argued for student ownership of the work undertaken in school. A related idea was that learning was likely to be more powerful and significant if it was ***learner-driven***. A similar approach was evident in another

group's suggestion that it was important to have high expectations of student self-regulation, and a further view that learning must be purposeful. Another group referred to the importance of discerning learners.

Discussion also noted the importance of teachers, as well as students, as learners. Valerie Hannon argued that the ***school should be a learning commons,*** requiring that everyone in a school should be a learner. Both teachers and students should have learning projects and intentions and be engaged in community investigations. Learning should be a shared and co-constructed enterprise. One common idea throughout the discussion was the view that ***everyone can learn and is entitled to learn***. This was taken to include both teachers and students.

The same idea was behind the expectation that learning should involve ***collaboration*** at the school level. Greg Butler noted that collaboration was closely associated with innovation. He also discussed data indicating that teacher professional development was most effective when it involved teachers working together on research tasks.

A related issue concerned the involvement of the ***human element in learning***. Patrick Griffin outlined the development scale of social skills as a complement to a scale of cognitive skills involve in collaborative decision-making, both being assessed because they are both essential to the outcome. Others referred to the importance of human interaction throughout the learning process, the value of a real audience for student work and the contribution to be made by interaction with community members.

A further theme was the importance of ***learning beyond the school***. Valerie Hannon talked about school as basecamp, recognising that while school remains important, it is only a starting point for learning. The school should be embedded in the community, and students should go out to pursue learning opportunities. This could include using the Internet at home and engaging with community and cultural organisations, businesses and sports institutions. Others noted the importance of extending access hours for schooling to enable a wider range of learners to benefit from educational services and as part of a move towards 'anywhere, anytime' education.

The notion of extension was also relevant to ***the role of technology in learning***. Greg Butler noted that the predominant use of ICTs in schools concerned consumption (e.g. searching for information). Creative, developmental, higher order uses were rare. Chris Kennedy argued that new technologies should not simply enable us to do the old things better; they should allow us to do things we could not do before.

Participants focused on the value of increased ***personalization of learning***. This issue caused some divergence, since there was a contrast between the idea of individual programs mediated via technology, and the idea of shared tasks and projects undertaken in collaboration but meeting the particular learning needs of individuals. A shared view, however, was that technology

could assist in making learning more flexible and better adapted to the needs of individual learners.

What is needed to achieve change?

One element missing from the conversation to date is independent evidence of the state of teaching practice in Australia. It is difficult to know what action to take, and impossible to measure progress, without baseline data on how effectively Australian teachers have adapted to a new paradigm of education, and how well they are delivering on 21st century skills. Julia Atkin argued at the symposium that there has been substantial progress in the last 30 years, and Tony Mackay noted the need to recognise what states and territories have achieved. It seems clear, however, from anecdotal and other evidence, that there are many Australian schools and classrooms where practice has not adapted to the reforms of recent years.

One area for action, therefore, is **a research program to identify the state of play in Australia's classrooms**. An initial scan would reveal whether there is an existing literature adequate to construct a clear picture, or whether further research should be commissioned specifically focused on the issues raised by the symposium.

Several speakers proposed that issues of ***teacher identity*** were central to a change process. Julia Atkin argued that discussion about teaching often focuses on practice (the 'how' of teaching) rather than principles (the 'what') and values and beliefs (the 'why'). She proposed that the shift involved a developmental framework as teachers take steps towards engaging in reflective, inventive practice. This would involve moving from operating on the basis of tacit knowledge, to making the knowledge explicit (though often recipe-driven), through deliberate, conscious practice. Margot Foster identified the self-identification of teachers as knowers as a key challenge. Research underpinning the South Australian Framework had identified 61% of teachers as operating on a content and control model, which she described as 'programitis'. The shift required was a move from operating on a script to becoming a designer of teaching practice.

Effective and supportive leadership was a shared interest. Speakers agreed that school leaders had a critical role in redesigning learning. Valerie Hannon articulated the need for system leadership at all levels to facilitate change. Chris Kennedy argued that the role of leaders was not simply to talk about change but to shine a light on best practice and to model the changes required. John Goh similarly spoke of the principal who demonstrates and models 21st century skills and behaviours, providing feedback to teachers and engaging with students. He saw the principal as helping teachers reflect on their progress and rethink their default values. Valerie Hannon described it as 'heartbreaking' to hear about the responsibilities being borne by our best teachers. What was needed was infrastructure that frees them and leadership that creates the space for them.

There were, however, differing views about the ***importance of systemic action*** to achieve change. Some speakers and participants argued that education systems and sectors should set the goals and parameters for change, target resources and monitor improvement. Julia Atkin spoke for another group when she argued against 'yet another framework' and in favour of a process that would capture the hearts and minds of teachers and support delivery on the ambitions outlined in the Melbourne Declaration. She suggested that the process of change should be driven by each learning community, but referenced to expertise that would often be provided from outside the school.

A common theme was the role of ***sustained professional learning opportunities and the establishment of a learning community***. Valerie Hannon argued for a substantial increase in professional development opportunities to enable teachers to acquire new roles and skill sets. Margot Foster noted that teachers asked to engage in new forms of teaching said that they needed to experience this for themselves as a community of learners. She suggested that a key challenge on the road to change was the engagement by education systems of teachers as learners. Jenny Gore identified sustained and effective professional development as a key requirement for improvement, but argued that it was important to focus on the substance of professional development, not just good processes. She set out the benefits of teachers noticing specific aspects of practice, engaging in fine-grained analysis and undertaking focused interventions to achieve improvement.

Several speakers saw ***teacher judgment of their own effectiveness*** as an area needing work. Alice Leung articulated the importance of teachers constantly critically reviewing their own practice and monitoring their effectiveness. Jenny Gore argued that the research evidence indicated there was too little guidance for teachers on how to judge the effectiveness of their own practice. Margot Foster indicated that the South Australian research was showing that one of the factors making a difference was evidence about what works. Patrick Griffin argued that higher order skills operate on a developmental continuum, and teachers needed to be familiar with the map of development if they were to understand student learning and the effectiveness of their own teaching.

Discussion of Jenny Gore's presentation raised issues about ***what kinds of measures were adequate to providing evidence*** about the kind of practice the symposium was discussing. Some speakers felt that NAPLAN and examination results were unlikely to indicate whether teachers were engaged in practices related to the new paradigm, or whether students were gaining the benefits of 21st century skills. Others noted that the Australian Curriculum, notably through the articulation of General Capabilities, had established a basis for more sophisticated forms of assessment reflecting 21st century learning. Patrick Griffin's discussion of his program for the assessment of collaborative problem solving indicated that assessment programs were now in development that were well-matched to 21st century skills. He argued that the explosion in knowledge meant that it was no longer possible to use

content knowledge as a basis for learning or the assessment of learning, although it could be used as a context for the learning of higher order skills. There was still, however, no comprehensive approach in this area, and substantial work to be done in the range of areas beyond those covered by Professor Griffin's work.

A further theme concerned the need to ***make the act of teaching more public***. Alice Leung told the symposium of wanting to make her own teaching visible by inviting other teachers to visit her classroom. Discussion of Jenny Gore's presentation suggested that pedagogy should be viewed as a collective, not an individual responsibility. John Goh described a model in which the principal works in the classroom with teachers, giving regular feedback.

There was a largely shared view that the discussion should address ***all of the work of teachers***. Norm Hart argued that a separation between curriculum, learning and pedagogy was artificial and that these should be intertwined in our discourse.

Assessment was also addressed in discussion of ***structural barriers to change***. Speakers noted the difficulty of focusing on 21st century skills when ***formal assessments*** (notably NAPLAN and the exit examinations) had a narrower focus and were sometimes inimical to both breadth and depth. A number of speakers and participants argued that the ***organisation of time and space in schools*** was a major barrier to improvement, along with the ***rigid organisation of class groups*** and ***restrictions on movement***. Bianca Hewes noted that school time constraints sometimes make collaborative planning and delivery almost impossible. John Goh suggested that schools needed to open earlier and for longer. He also proposed that we need to change learning spaces with flexible settings, collaborative and individual settings and furniture that supports flexibility. Chris Kennedy argued that without opportunities for children to learn anywhere and at any time, these barriers would remain. Valerie Hannon argued for holistic school redesign (including, but by no means limited to, physical design) to enable and stimulate new practices. A number of speakers noted the potential for ***educational technologies to be used to break down time and space barriers to learning***.

A key theme, also concerned with barriers to change, was the need to ***go beyond history and complacency***. Valerie Hannon challenged Australians to recognise that being a relatively high performing system could be a barrier to recognising and acting on the drivers for change. Chris Kennedy noted that British Columbia had done exceptionally well with 'the old way of teaching'. If the world had not changed, BC would have been fine. But the system needed to go beyond feeling good about PISA results, which were a snapshot of what they were five or 10 years ago. The question for BC, as for Australia, is what will the future look like.

Points of tension or opportunities?

In the course of the symposium discussion, it became clear that there were many points of tension and disagreement, and areas where a collective view had not yet formed. It seems likely that these will constitute both opportunities for further discussion and research, and potentially barriers to progress if they remain unresolved.

Strategic issues

1. We have been having this, or a similar, conversation for decades without achieving widespread systemic change. We need to do something different, and we need to know why we have not so far achieved change at scale. How well do we understand our relative failure to date?
2. While some research was cited, there was no clear picture of the state of play, including the extent and kind of innovation, in Australia's classrooms. Without data of that kind, it is hard to identify areas for action and to measure progress. Is the data already available? What form of research could fill the data gap?
3. While there is no road map to the future, we do need to take action. What is our plan to achieve change?
4. How do we overcome complacency about being a well-performed system and generate the energy required for large-scale change?
5. How much is there a shared vision about the kind of student we want to emerge from schooling? How could a greater consensus be achieved?

What scale of change?

6. Are we talking about a shift in classroom practice or the wholesale transformation of schooling? Discussion of the three elements of the Australian Curriculum (learning areas, general capabilities and cross curriculum competencies) as a basis for a new paradigm was challenged as representing a shift in pedagogy, but not a paradigm shift in the whole of schooling.
7. How important is the substantial redesign of schools (including but not limited to physical redesign) and how can this be initiated?
8. How do we value the development of outstanding 'hero teachers' against systemic improvement of a mass profession. What can realistically be achieved by all teachers, when one in every 80 Australians is a teacher?
9. It is relatively easy to achieve change among willing volunteers. How do we work with the unwilling and the conscripts? How do we achieve the kinds of outcomes we expect with the less able members of the profession?
10. Can a gradual process of change achieve a new paradigm, or does it need radical intervention and a step-change?

What is the new pedagogy?

11. What is the relationship between teacher subject knowledge, pedagogical content knowledge and a focus on higher order skills?
12. What does it mean to pedagogy and school practice to shift student capacity from consumption to production roles?

13. Is there a definable good pedagogy? Can we crystallise what we mean by good practice? Would that practice apply in all learning areas, settings, contexts and classrooms?
14. What is the appropriate balance between form (or process) and substance (content broadly conceived) in relation to both teacher and student learning?
15. How can we assist a greater focus on depth rather than breadth in learning?
16. How effective are specific pedagogical approaches such as project-based learning and learning by design?
17. How much is deeper engagement with a group of students a part of the change we require?

Assessment

18. What measures of learning constitute an effective guide to what works and an adequate match for the ambitions of the new paradigm?
19. Can we design, develop and conduct assessment that matches the ambitions of a new paradigm?

Capacity issues

20. How can we design, manage and deliver sufficient opportunities for high quality, new paradigm professional learning to enable substantial change in the practice of all teachers?
21. How feasible is the idea of the school as a learning commons? What steps would achieve a shift in that direction?
22. Do we have the capacity to scale up from a good classroom to a better school and system? What would this involve?
23. If local reform projects are to be provided with expert external assistance, where and how can that be sourced?

Leadership, authority and control

24. What role can school leaders play in the redesign of learning?
25. What is the best balance between local leadership (autonomy, initiative and decision-making about the focus for change) and systemic leadership (guidelines, support, frameworks and economies of scale)
26. The Melbourne Declaration might not provide a sufficiently explicit and detailed account of our values about learning to be a driver for systematic action.

Structural barriers

27. To what extent do the structural issues in schooling (exit assessments, NAPLAN, employment arrangements, school buildings…) form barriers to improvement? How can those be managed?
28. How can school time and space be restructured and made more flexible to enable better teaching and improved access to education?
29. What role can technology play in overcoming the time and space barriers to flexible learning?
30. Can we open the classroom to scrutiny in an environment of accountability and industrial controls?

31. Under what conditions will teachers feel able and encouraged to teach in a more adventurous and exploratory way?

Teachers and students

32. What is the role of the teacher when students are self-directed?
33. What is the role of self-directed online learning for teachers? For students?
34. What do we mean by personalized learning?
35. What is the role of failure as a step towards improvement for teachers? For students?
36. Operating in a new paradigm, how do we balance meeting the needs of low-performing students with raising the performance of all students?

AITSL priorities for action

Not all of the proposals above are appropriate as a focus for AITSL. Nor are all of them feasible as research questions. Some clusters, however, do suggest potential areas for action consistent with AITSL's remit and the state of play in Australian classrooms. This brief discussion below reflects Tony Mackay's call towards the end of the symposium for a road map for change, and an action program supporting reform.

The central focus of reform, based on the discussion at the symposium, should be the learning experience of children, and those factors that can effect improvement in their engagement in learning and the cognitive and behavioural outcomes they gain. The factors to be examined must include pedagogy, assessment, leadership, technology, barriers to change and extending learning relationships beyond the school.

In summary form, the following areas are those that seem most suggestive for AITSL's future work program. The assumption is that the categories proposed could form the basis for collaborative exploratory work with schools that are either already engaged in these areas or have a strong case to argue their readiness to engage, and with other partners drawn from Australia's educational infrastructure and potentially international agencies and organisations. These proposed areas are neither exclusive nor comprehensive. They reflect the focus of discussion at the symposium, but they are a selection from that discussion.

A research program to identify the state of play in Australia's classrooms.

It was clear from the discussion that there is a range of conflicting views about the extent to which Australia's classrooms have begun or made progress towards the implementation of new forms of pedagogy appropriate to the development of 21st century skills. An initial scan would reveal whether there is an existing literature adequate to construct a clear picture, or whether further research should be commissioned specifically focused on the issues raised by the symposium. The research could have as its aim the

establishment of baseline data, as a means of determining the effectiveness of development initiatives.

Exploration of pedagogy that achieves engagement and cognitive development

The symposium heard presentations and discussion about a number of approaches to pedagogy that seemed to have the potential to strengthen the cognitive outcomes of schooling and improve student engagement. Two of particular interest were project-based learning, discussed by Valerie Hannon and some other speakers, and learning by design, discussed by Julia Atkin and others. Both approaches have a strong track record, are in relatively widespread use in a range of schools, and seem to show potential for supporting the delivery of stimulating, engaging and cognitively demanding experiences for students.

Assessment appropriate to 21st century skills

Assessment is among the critical barriers to improvement in the areas discussed in the symposium. This is true both of the impact of high stakes formal assessment programs that largely fail to recognise 21st century skills, and the absence of programs that provide sophisticated measurement of those skills. The latter category, presently the subject of some work of which Professor Griffin's project on collaborative problem solving is a significant example, deserves broader attention. There is clear value in the development and testing in use of assessment programs that support the measurement of those skills that make up the most ambitious elements of the Melbourne Declaration.

School leadership for redesigned learning

The symposium was strongly supportive of the view that school leadership is a key component of any effective change program. If teaching and learning programs, the core business of schools, are to be redesigned, the work will only be done effectively if it is well led and well managed by school leaders. Speakers were articulate about the key importance of stimulating and supporting new models of leadership appropriate to the redesign of the student experience and the management of changes in school operations to facilitate that redesign.

The role of technology in overcoming barriers to learning

While there is now an extensive literature and practice in the educational use of digital technologies, the symposium focused to some extent on a specific set of potential roles: the capacity for technology to overcome some of the structural barriers to more flexible learning. Speakers consistently referred to barriers of time and space, the inflexibility of the school timetable and physical infrastructure, and the value of anywhere-anytime learning. It seems clear that there are productive examples of the use of technology to overcome some of

these barriers. This could be one mechanism by which the very high expectations for the effect of new technologies in education could be realized.

Extended learning relationships

A key discussion throughout the seminar concerned the potential to extend learning beyond the school basecamp. The symposium challenged the view of school as the sole locus of learning, speakers arguing that students should be learning in the community and from community members, and tackling projects with significance in the world beyond the school. Discussion suggested that there was an educational role for community and cultural organisations, business and sporting organisations. This was linked with the idea of ‘anywhere-anytime’ education. There was a clear consensus that we should be exploring how to extend learning relationships beyond the school.