Independent Schools Queensland
choice & diversity

Leading Curriculum Innovation
A discussion paper

November 2016

St Paul's School

Our Schools – Our Future

About Our Schools – Our Future

Our Schools – Our Future is an Independent Schools Queensland (ISQ) research-based initiative designed to promote informed public policy debate about schooling. Through commissioned and internal research, Our Schools – Our Future explores trends and issues in key areas which determine the nature and performance of our school education systems. While the initiative has a particular focus on the contribution of independent schools to our education provision and outcomes, it examines a range of issues and trends relevant to the development and implementation of effective public policy for schooling. All research reports are available to members on the Independent Schools Queensland website at www.isq.qld.edu.au

Disclaimer

This paper is not an ISQ policy statement on the curriculum. Rather it is a paper that has been developed to generate and provoke discussion and debate among policy makers, educators and schools on the design and delivery of the curriculum in Queensland. It deliberately poses provocative questions about the explicit incorporation and teaching of 21st century skills in the curriculum in Queensland and challenges schools to reflect on and consider their individual approaches within the context of the needs and expectations of their local communities. Some educators and schools may hold an opposing view to what has been presented. The design and delivery of the curriculum in independent schools is an individual school decision.

This paper follows on from an ISQ Curriculum Innovation forum and subsequent briefings and workshops for school and curriculum leaders during 2015 and 2016. The work of the ISQ Executive Manager (Australian Curriculum), Jenene Rosser, in preparing this paper is acknowledged.

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Foreword

There is nothing more certain than change. But what sets apart this period in our history is the speed at which our world is being transformed by advancements in new technologies and intelligence. This presents significant challenges for education systems and schools which are responsible for educating and equipping students for an unknown world.

Internationally and nationally work is already afoot to investigate how to assess 21st century skills, such as creativity, critical thinking and global competence. This assumes that students are learning and acquiring these skills and attributes at school. In Australia, these contemporary skill sets, or general capabilities, are a core pillar of the P–10 Australian Curriculum.

The Australian Curriculum has and continues to be the subject of considerable discussion and debate, most notably in recent times around the breadth of content teachers are required to cover. The Queensland Government recently released the report recommendations of a statewide review into defining a "core" P–10 Australian Curriculum, with the outcome being a freeing up of content in some learning areas.

It is an opportune time to consider the role and emphasis placed on the 21st century general capabilities in the curriculum in Queensland. This discussion paper challenges policy makers, curriculum experts, educators and schools to look with fresh eyes at how to more strategically and intentionally incorporate these contemporary capabilities into the design and delivery of the P–10 Australian Curriculum in a way that not just engages students, but ignites their curiosity and inspires them to new heights of learning.

To capture and extend this discussion, in July 2017 Independent Schools Queensland, with the support of the Australian Curriculum, Assessment and Reporting Authority, will bring together policy makers, curriculum experts and schools to share their thinking at two forums led by Professor Ronald Barnett from the University College London Institute of Education. Professor Barnett is an internationally acclaimed higher education analyst and author who has spent the past 30 years challenging tertiary institutions to re-imagine themselves and is now posing this same question to school educators.

I commend *Leading Curriculum Innovation* to independent school educators and public policy makers and encourage you to contribute to this timely and challenging discussion.

David Robertson
Executive Director
Independent Schools Queensland

Fraser Coast Anglican College

Executive Summary

There is mounting global and national discourse about the "disconnect" between the knowledge and skills students are learning during their 13 years at school and what they will need to live and thrive in the rapidly changing, technologically driven and globally connected world outside the school gate. It is a conversation that many independent schools and local and global policy makers are already well engaged in.

At an international level a new global education framework that details the transferable knowledge, skills and capabilities which students will require to be successful citizens in 2030 is being developed. At home, the Australian Government has made the teaching and assessment of 21st century skills a policy priority.

Students across the nation are already expected to acquire and demonstrate these contemporary skill sets and competencies as part of the P–10 Australian Curriculum. These general capabilities have been part of the curriculum since 2010. However, in Queensland these essential skills are not identified as deserving of their own explicit instruction. Instead they are embedded across learning areas. Some educators would argue this has diluted their importance and therefore the attention paid to them.

This paper seeks to encourage discussion and reflection on the design and delivery of the P–10 Australian Curriculum in Queensland. However, given the curriculum is a national document, this debate has relevance and potential implications for Australia. This paper seeks to stimulate thinking by arguing that:

- Traditional curriculum designs that are structured around and driven by subject area content are not sufficient on their own to engage students or prepare them for life after school.
- 21st century skills, identified as general capabilities in the Australian Curriculum, need to be explicitly included and taught as part of the curriculum in Queensland.
- Queensland should consider adopting a framework approach to the Australian Curriculum that identifies a non-negotiable, limited set of subject-based knowledge and 21st century general capabilities, but also gives schools sufficient time and flexibility to respond to the needs and local circumstances of their communities.
- Schools should consider adopting transformative pedagogies which involve students in the design of their own learning and incorporate deep inquiry-based practices.

Introduction

"The world no longer rewards people just for what they know – Google knows everything – but for what they can do with what they know."

Andreas Schleicher, OECD Director for Education and Skills.

In a globalised world of rapidly changing circumstances young people now need to be much better prepared for living, working and thriving in contexts that are vastly different to those of even 20 years ago. Increasing evidence points to the need for young people to: develop skills in effective communication across distance and across borders; learn how to collaborate; be agile in their thinking; and respond swiftly to rapid change. They must also build the confidence and willingness to innovate and create their own opportunities. Young people are learning these skills, often it would seem, outside schooling.

Internationally, the Organisation for Economic Co-operation and Development (OECD) has recognised this gap and is currently developing a new global education framework that outlines the knowledge, skills, attitudes, values and competencies students will require for the 2030 world. One of the cornerstones of this future framework is that "the evolution of the traditional disciplinary curriculum should be rapidly accelerated to create knowledge and understanding for the 21st century".[1]

Nationally, the Australian Government has also nominated student mastery of 21st century skills such as "collaboration, problem solving, critical thinking, creativity and innovation" as one of its policy priorities. In its *Quality Schools, Quality Outcomes* paper, the Government said "education systems and schools … need to better support students in learning" these skills. This is consistent with its broader innovation agenda.

Australia already has a robust national curriculum that identifies seven capabilities that policy makers and education experts deem critical, along with essential discipline-based knowledge, for students to live successfully in the 21st century. These capabilities are: literacy; numeracy; information communication technology (ICT) capability; critical and creative thinking; personal and social capability; ethical understanding; and intercultural understanding. However, in Queensland these capabilities are embedded in subject area content in the curriculum and not addressed separately, as distinct skills requiring explicit instruction.

There is mounting evidence challenging the current curriculum focus and organisation. This presents an opportunity for independent schools to consider leading new ways of teaching these critical skills. This paper deliberately seeks to challenge schools to re-imagine their curriculum from what has always been done, to what could be, by engaging with research evidence and participating in strong in-house debates to challenge traditional approaches.

1 Organisation for Economic Co-operation and Development. (2016). *Global Competency for an Inclusive World* (p. 2). Paris: OECD.

A number of schools are increasingly looking to: incorporate student voice and agency in curriculum design and delivery; to negotiate with students what they want to learn; and to make space and time for teachers and students to be co-makers of the curriculum using approaches, like deep inquiry, which naturally engage a child's curiosity.

The move to assess student mastery of 21st century skills is already gaining momentum with the Australian Curriculum, Assessment and Reporting Authority (ACARA) confirming that it is "currently working to expand the scope of the sample National Assessment Program (NAP) to address a number of general capabilities within the Australian Curriculum through the relevant learning areas. Some of the general capabilities, such as literacy and numeracy and ICT capability, are already assessed under the NAP, ACARA is seeking to also address critical and creative thinking, ethical understanding, intercultural understanding and personal and social capability".[2]

At the international level for the first time in 2018, the Programme for International Student Assessment (PISA) will assess the global competence of 15-year-olds around the world. It is proposed that students will be tested on analytical and critical thinking, their knowledge and understanding of global issues and their intercultural knowledge and understanding.[3]

Victoria has already moved forward in this area with the state explicitly teaching four of the seven general capabilities identified in the Australian Curriculum as discreet stand-alone areas. From 2017, Victorian schools will be required to assess and report on student proficiency in these general capabilities. The Mitchell Institute is working closely with the Victorian Curriculum and Assessment Authority (VCAA) and schools on how to teach and assess these capabilities in the curriculum with trials occurring in 11 schools.

It is clear that the curriculum and assessment landscape is changing. It is therefore timely at both the state and school levels to reflect on and to discuss and debate the design and delivery of the Australian Curriculum in Queensland schools. What flows out of these rigorous and challenging discussions should be purposeful decisions in schools to retain, refine or revamp their curriculum approach.

This paper is not seeking to debate the specific content of the Australian Curriculum; this has already been the subject of extensive discussion and review. However, it does question whether the strong focus on teaching students volumes of content through a traditional discipline-based structure is doing them a disservice. While some subject-based learning is essential, this paper argues that it is not sufficient on its own, nor is it adequate for the valuable 21st century capabilities to be embedded within those disciplines. This paper contends that these contemporary skill sets need to be explicitly taught so that students are well equipped to take up the jobs and solve the problems of the future.

As autonomous education providers with diverse educational approaches, independent schools are well placed to respond to and lead curriculum innovation in Queensland. Many schools are already doing so, as evidenced in this paper.

2 ACARA. (May 2016). Submission to the Productivity Commission inquiry into a national education evidence base.
3 Organisation for Economic Co-operation and Development. (2016). *Global Competency for an Inclusive World* (p. 6). Paris: OECD.

Curriculum Disruption
Challenging the Status Quo

"Our task is to educate their (our students) whole being so they can face the future. We may not see the future, but they will and our job is to help them make something of it."

Sir Ken Robinson, *The Element: How Finding Your Passion Changes Everything.*

Globalisation

Today, jostling alongside traditional schooling are new discourses of learning that are challenging the status quo. Numerous international sociologists and commentators including Sir Ken Robinson, Professors Yong Zhao and Fazal Rizvi argue that there is a "New Normal" with new technologies driving a shift to a more flexible, specialised and decentralised form of labour process and work organisation. National and international borders have become increasingly transparent with technology creating virtual communities across the globe. Facebook is but one example with the social network's latest community estimated to be 1.7 billion monthly active users – that's almost 23 percent of the world's total population.[4]

The "New Normal" requires new ways of thinking about our world which is continuing to change at lightning fast speed. New models to understand the growing reality of global connectivity and interdependence inevitably lead to debates about knowledge and its uses and the destabilisation of social norms and socialisation processes. This is challenging for education systems and schools which are grounded in traditional structures and approaches to learning.

Youth advocacy group the Foundation for Young Australians (FYA) has commissioned a range of reports to better understand and support "the next generation of young people … to rethink the world and create a better future". According to the Foundation, "if young people are to take up the challenge of growing an economy with a shrinking workforce, and navigate a changing world that is more complex, global and flexible, they will need to be innovative, creative and enterprising".[5]

These are the skills and attributes employers are increasingly expecting of their future workers, according to research by the Foundation. FYA analysed 4.2 million online job postings between 2012 and 2015 in Australia from more than 6,000 sources to identify what employers were looking for.

They then pulled out the jobs that targeted young workers with up to five years' experience. Over the three-year period the Foundation found employers were listing more enterprise skills in their job advertisements. For example, the proportion of jobs that demanded critical thinking increased by 158 percent; creativity by 65 percent; presentation skills by 25 percent; and team work by 19 percent.[6]

These are the expectations of employers today. But what skills and characteristics will organisations be looking for in 2030 when many of today's Prep students will be in the workforce or studying to gain employment? And what jobs will these employers be recruiting for?

According to the 2015 report *Australia's Future Workforce?* by the Committee for Economic Development of Australia (CEDA), about 40 percent of Australia's workforce – about five million jobs – "face the high probability of being replaced by computers in the next 10 to 15 years". CEDA warned that in order for Australia to be competitive into the future, education institutions, the private sector and government must all drive a culture of innovation.

4 Facebook. (2016). Website company statistics to June 2016.
5 Foundation for Young Australians. (2014). *Unlimited Potential: A Commitment to Young Australians* (p.5). Melbourne: FYA.
6 Foundation for Young Australians. (2014). *THE NEW BASICS: Big Data Reveals the Skills Young People Need for the New Work Order* (p.7). Melbourne: FYA.

This is a challenge that is confronting nations and education systems across the world as OECD Director for Education and Skills Andreas Schleicher has consistently pressed home in international speeches and articles. "A generation ago, teachers could expect that what they taught would last for a lifetime of their students. Today, schools need to prepare students for more rapid economic and social change than ever before, for jobs that have not yet been created, to use technologies that have not yet been invented, and to solve social problems that we do not yet know will arise."[7]

In its report, CEDA called for all stages of the education process "to focus on instilling competencies rather than the retention of specific knowledge. With public funds being invested, it is important that the skills being taught are not firm specific, but instill broad competencies that represent a valuable public investment."[8]

With today's students facing an employment future that will see them change jobs in the order of 17 times and careers five times, young people are also questioning how their current education is adequately equipping them for such a disruptive employment future. A student engagement initiative by the Centre for New Public Education involving 4,436 students aged between 13 and 18 revealed some of the top concerns students hold about the current schooling system. According to an analysis of student votes, one in five young people said they were concerned "their education was too narrowly focused and was not preparing them for the future", while one in three were most concerned about "the failure of the education system to engage them and meet their learning needs".[9]

Against this backdrop of global change and increasing demand from students themselves for a more engaging and relevant education experience, how do we design a curriculum for today's Prep students in 2016 that will keep them in good stead for their lives post school? To answer this question, it's important to understand how our current curriculum was created, its theoretical underpinnings and the political and social climate in which it was framed.

7 Schleicher, A. (2016). Educating for Innovation and Innovation in Education. *Education and Skills Today Blog*. 26 September 2016.

8 Committee for Economic Development of Australia. (2015). *Australia's Future Workforce?* Melbourne: CEDA.

9 Foundation for Young Australians. (2013). *Student Shoutout: Students' Perspectives on Education.* (p. 13). Adapted report from the Centre for New Public Education (CNPE) submission to the Senate Education, Employment and Workplace Relations References Committee's inquiry into teaching and learning. Melbourne: FYA.

Re-imagining schooling for a 2028 world

St Paul's School

"We don't just prepare students for the jobs of tomorrow – some of our students go on to create them."

Envisioning what the world will be like when today's littlest students complete school inspired a profound re-imagining of teaching and learning at St Paul's School in 2015.

The Pre-Prep to Year 12 school, located at Bald Hills in Brisbane's north, interviewed 30 global experts across a range of disciplines including politics, education, economics, theology and philosophy, to build a picture of the world in 2028.

Headmaster Dr Paul Browning says the insights from global experts, combined with extensive research, prototyping and testing of new concepts of teaching and learning, reshaped and sharpened the school's focus to "ensure we are adequately preparing our students to be successful in an uncertain world".

Mr Browning says: "We believe that an education worth having is one that builds agile, resilient students, that instils in them an entrepreneurial mindset and innovative spirit, and grows a heart for servant leadership."

The school is developing these skills and attributes in students through five "learning realms": creativity, design thinking, entrepreneurialism, global sustainability and inquiry. It is also challenging traditional concepts about education, the curriculum and the roles of students and teachers. The school is harnessing the untapped goldmine of student creativity and passion by inviting, challenging and encouraging students to partner in shaping and designing their own learning.

One example of the new learning that is happening in the school is the partnership it formed with start-up hub River City Labs to establish the nation's first Entrepreneurs Club to ignite and transform ideas into real-world enterprises.

Curriculum Creation
Building a Foundation for Learning

"If there is not enough flexibility in the prescribed curriculum, if everybody does the same thing – and especially if it is coupled with standardised testing and accountability – it could produce mass mediocrity."

Professor Yong Zhao, internationally recognised scholar.

What is "curriculum"

The curriculum is a contentious and politically charged area of education. But what do we mean by the term "curriculum"? For the purposes of this paper, we will use British author Albert Kelly's definition of curriculum, which explains it as: "The totality of the experiences which the pupil has as a result of the provision made".[10] This definition includes the preactive curriculum (all that is planned) as well as the interactive curriculum (all that actually happens). Australia's formal or official curriculum, the Australian Curriculum, is one part of the preactive curriculum and describes what teachers teach and what children learn in the formal, planned teaching program that occurs within schools.

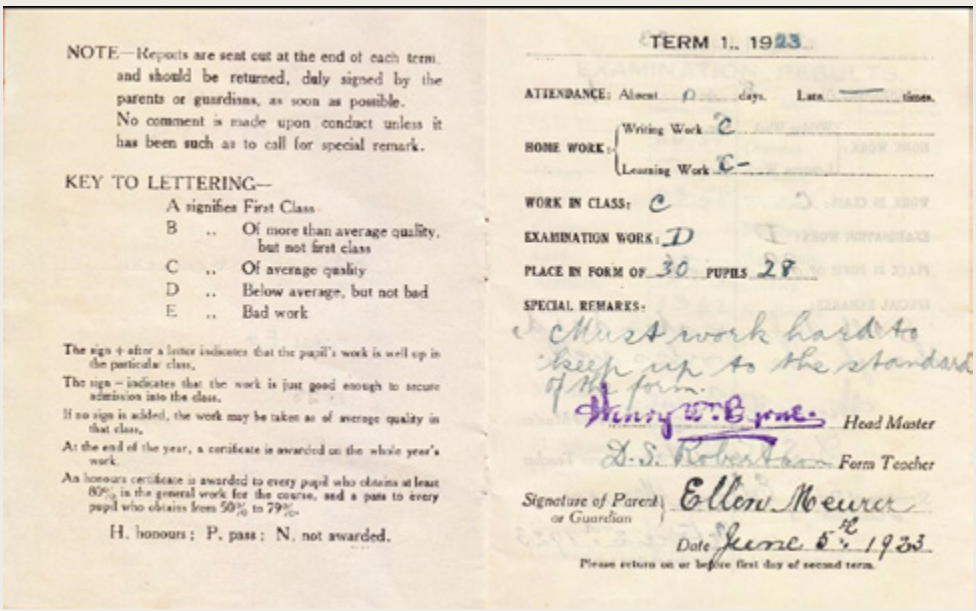
It is grounded in many taken-for-granted assumptions about learners, learning, the place of the teacher, the structures of schools and the role and structure of the curriculum.

This paper encourages independent schools to deeply consider what theoretical foundation their current curriculum sits upon and, if appropriate, to interrogate and challenge some of those beliefs. There are many taken-for-granted assumptions that have evolved through the historical development of curriculum theories over the past 100 years. Two opposing theories have dominated, these being the work of American philosopher and educator John Dewey and the more scientific traditions of curriculum theorists Franklin Bobbitt, Edward Thorndike and others. Dewey's work put the child's needs and experiences at the centre of learning with the curriculum comprised of purposeful activities devised to develop social and community life that in turn strengthened society and democracy. In contrast Bobbitt and Thorndike were more scientific and prescriptive in their theories. They saw learning occurring in small sequential, linear steps that could be easily measured and reported on.

Government accountability and productivity agendas that increasingly seek to prescribe and measure student outcomes have seen a strong swing to the Bobbitt/Thorndike curriculum traditions. However, this paper contends that the development of 21st century skills in young people requires aspects of Dewey's philosophy – that is, understanding the needs and experiences of the child and what engages him/her – to be honoured within a broader vision for the "ideal" society.

A curriculum fundamentally establishes a vision of the kind of society we want in the future and the kind of people we want in it. Decisions about what is included in the official curriculum change from time to time depending on political needs, aspirations and hot-button social issues. There has been an increasing propensity to look to schools to incorporate a growing list of public health and well-being issues into the curriculum such as cyber safety, drug education, financial literacy, respectful relationships and radicalisation. It may be that as a nation we determine that some of these issues should be part of the essential knowledge that we want all young people to learn. But as a nation we must resist knee-jerk responses to load up the curriculum.

10 Kelly, A. (1999). *The Curriculum: Theory and Practice.* (p.7). London: Paul Chapman.



NOTE—Reports are sent out at the end of each term, and should be returned, duly signed by the parents or guardians, as soon as possible.
No comment is made upon conduct unless it has been such as to call for special remark.

KEY TO LETTERING—
A signifies First Class
B .. Of more than average quality, but not first class
C .. Of average quality
D .. Below average, but not bad
E .. Bad work

The sign + after a letter indicates that the pupil's work is well up in the particular class.
The sign – indicates that the work is just good enough to secure admission into the class.
If no sign is added, the work may be taken as of average quality in that class.
At the end of the year, a certificate is awarded on the whole year's work.
An honours certificate is awarded to every pupil who obtains at least 80% in the general work for the course, and a pass to every pupil who obtains from 50% to 79½%.
H. honours; P. pass; N. not awarded.

TERM 1., 1923

ATTENDANCE: Absent 0 days. Late — times.
HOME WORK: Writing Work C
Learning Work C-
WORK IN CLASS: C
EXAMINATION WORK: D
PLACE IN FORM OF 30 PUPILS 28
SPECIAL REMARKS:
Must work hard to keep up to the standard of the form.
Henry W. Byrne. Head Master
D. S. Robertson Form Teacher
Signature of Parent or Guardian Ellen Meurer
Date June 5th 1923
Please return on or before first day of second term.

Figure 1 – 1923 Student Achievement Report Example from a Victorian Regional School

Source: Victorian Curriculum and Assessment Authority. (2014). *F–10 Curriculum Planning and Reporting Guidelines.* Melbourne : VCAA.

A lesson from some of the top performing education systems is that the curriculum is not a mile-wide and an inch-deep, but tends to be rigorous, with a few things taught well and in great depth.

The Australian Curriculum

The Australian Curriculum is the fifth change of curriculum for teachers in Queensland since the late 1990's. To say teachers have "change fatigue" in regard to curriculum development is an understatement. What is important to note, is that in each of these curriculum iterations, the same grammar of schooling is perpetuated. There are no challenges to the basic assumptions that the curriculum will describe what students should learn, in small incremental steps linked to age/year level and that student achievement will be reported in the same lock-step, subject-based way. Reporting student achievement has changed remarkably little over the past 100 years. *Figure 1* shows a reproduction of a student report from a regional school in 1923. Many of the report elements are identical to contemporary reports and illustrate that as educators we accept the same framework or philosophy underpinned by the same assumptions of schooling that were valued in 1923.

The move from state-based curriculums to a nationally consistent curriculum gained ground during the decade from 2000, with the *2008 Melbourne Declaration on Educational Goals for Young Australians* outlining for the first time a national vision for 21st century schooling. ACARA interpreted the key arguments of the *Melbourne Declaration* into a design for Australia's first national curriculum. Three pillars provided the overarching framework for the Australian Curriculum: learning areas; general capabilities; and cross-curriculum priorities. The general capabilities represented the first attempt to define the "knowledge, skills, behaviours and dispositions" students needed, in addition to traditional subject-based knowledge, to live and work successfully in the 21st century. These capabilities are: literacy; numeracy; information and communication technology (ICT) capability; critical and creative thinking; personal and social capability; ethical understanding; and intercultural understanding.

The inclusion of these 21st century skill sets represented an important shift in the make-up of curriculum in Australia. However, interpretation of the general capabilities at the state and territory level has resulted in hybrids of the Australian Curriculum, instead of the same homogenous pure national curriculum, being taught in classrooms across the nation. Five years after the first subjects were released in 2010, ACARA stopped describing the curriculum as being an "entitlement for all" to an "aspirational curriculum" that states could choose from to create state-level documents. The language simply gave belated authority to what had already been happening around the nation.

The approach in Queensland

The primary focus of the Australian Curriculum in Queensland remains on the traditional learning areas, with the other two pillars – the general capabilities and cross-curriculum priorities – "embedded" within traditional subjects and learning areas. As the only state to adopt and implement the Australian Curriculum without modification, Queensland schools, particularly those in the independent sector which are teaching the full complement of the Australian Curriculum, have been best placed to provide informed comment on the curriculum. The most persistent

criticism has been the overloading of content, which remains an issue in Queensland, despite it being raised in a national review in 2014.

In response to ongoing concerns about curriculum overcrowding and associated workload issues from all schooling sectors in Queensland, in 2015 Queensland Education Minister Kate Jones tasked the Queensland Curriculum and Assessment Authority (QCAA) with identifying, in consultation with school sectors and key education stakeholders, a Core P–10 Australian Curriculum for Queensland schools. The Minister released QCAA's *Core P–10 Australian Curriculum* report and recommendations in July 2016. The recommendations included, but were not limited to the following: no changes to English and Mathematics content across all year levels; combining History, Geography and Civics and Citizenship into one Humanities and Social Sciences subject for Prep–Year 6; reducing duplication in Science; and giving schools more flexibility in the subjects they deliver in the Arts.

The QCAA report also recommended more flexible time allocations to various learning areas than what has been prescribed by ACARA. However, the review made no mention of the general capabilities and their role in a core P–10 curriculum for Queensland students.

The approach in Victoria

In Victoria four of the seven general capabilities – critical and creative thinking, personal and social capability, intercultural understanding and ethical understanding – have been defined as having a discrete set of knowledge and skills. The VCAA has developed "content descriptions and achievement standards" for these four capabilities. The VCAA allows, within a framework, for each school to decide what its focus will be during three stages of schooling – Foundation (known as Prep in Queensland)-Year 2, Years 3–8 and Years 9–10.[11]

By freeing up the expectations on what schools in Victoria are expected to teach and report on, the VCAA allows schools the time to develop the capabilities they value.

Further, the VCAA argues that all students should have the opportunity to learn the knowledge and skills defined by each learning area domain, however they do not have to do this in subject silos and learning could be instead integrated; problem-based; through vertical structures; and, or inquiry-based.

The VCAA has taken the position that it is essential "to define a minimum and limited set of declarative and procedural knowledge and skills that all students should acquire, irrespective of their personal inclinations. This is not to limit what students can learn. Rather, it is to ensure that every young person is able to develop the foundational knowledge, skills and dispositions that enable future self-directed learning, social development and active and engaged citizenship".[12]

This paper questions whether Queensland needs to consider freeing up its curriculum further by taking a framework approach, similar to Victoria. This approach would identify the essential learning and a sub-set of general capabilities which are non-negotiable. But would also give schools the freedom to determine local curriculum offerings that best match the needs of their student communities.

11 & 12 Victorian Curriculum and Assessment Authority. (2015). *Victorian Curriculum F–10: Revised Curriculum Planning and Reporting Guidelines.* Melbourne : VCAA.

Creating real-world connections to make learning "stick"

Fraser Coast Anglican College

"Learning 'sticks' when students are engaged and their learning has relevance."

At Fraser Coast Anglican College, the curriculum is being re-designed and re-moulded around the needs of students.

Armed with rich academic data on individual students, teachers are planning their programs and differentiating their instruction to meet the unique learning needs of the children in front of them, not teaching to the middle or an "average" ability student.

The Pre-Prep to Year 12 school in Hervey Bay is engaged in a whole-school re-examination of how they deliver the Australian Curriculum. Early work has commenced in the primary school, where there has been greatest concern about the swollen content, to unpack how the curriculum has been designed and delivered and to look at it from a concept-based lens.

Deputy Principal Joe Wright says traditional approaches to teaching assume a student's prior knowledge and mastery of concepts from a subject-based perspective from year to year. Mr Wright says instead of allowing the curriculum to drive decisions and priorities in classrooms, the school is now using the curriculum "to meet the goals the school leaders and teachers have identified as important". Those goals include equipping students with the knowledge and skills they will need to navigate an uncertain future in a globally connected and integrated world, but done in a way that promotes inquiry and deep learning – "sticky learning".

A recent example involved Year 6 students designing a product for sale. The school loaned each student $20 which they had to invest in the creation, marketing and sale of a product at a market day attended by other Junior students. Mr Wright says the project involved Mathematics, entrepreneurship, and financial literacy concepts including profit and loss, as well as English and Design Technology skills to create the product and persuasive marketing material.

"The students were engaged and motivated because they chose their product and saw the relevance in the task, a clear connection to the real world," Mr Wright says.

Curriculum Innovation Leading Change

"If we teach today's students as we taught yesterday's, we rob them of tomorrow."

John Dewey, curriculum theorist.

Internationalisation

A profound argument for why independent schools might re-design their current curriculum offerings is provided when considering the globalised and fast-changing world. There are critical skills that current and future generations need to enact today in order to find solutions for tomorrow's global challenges. Global citizenship education develops the knowledge, skills, values and attitudes learners need to build a more just, peaceful, tolerant, inclusive, secure and sustainable world. The term "cosmopolitanism", is increasingly being used as a broader and more inclusive term than global citizenship. "Internationalisation of the curriculum" also captures the same intent.

According to the United Nations Educational Scientific and Cultural Organisation (UNESCO), the purpose of global citizenship education is to build values, social and emotional skills and attitudes among learners to facilitate international cooperation and promote social transformation.

Global citizenship education applies a multifaceted approach, employing concepts, methodologies and theories already implemented in different fields and subjects, including human rights education, peace education, education for sustainable development and education for international understanding. As such, it aims to advance these overlapping agendas which share a common objective to foster a more just, peaceful and sustainable world.[13]

UNESCO supports and encourages schools to explicitly develop in their students "cosmopolitan" attributes that will allow students to seamlessly move across international boundaries, working in multi-cultural settings, using collaborative communication to achieve common goals.

Transformative pedagogy and amplifying student voice

In an increasingly interconnected and interdependent world, there is a need for transformative pedagogy that enables learners to resolve persistent challenges related to sustainable development and peace that concern all humanity. UNESCO has identified these challenges as including "conflict, poverty, climate change, energy security, unequal population distribution, and all forms of inequality and injustice which highlight the need for cooperation and collaboration among countries that goes beyond their land, air, and water boundaries".[14]

13 & 14 United Nations Educational Scientific and Cultural Organisation. (2014). *Global Citizenship Education: Preparing Learners for the Challenges of the 21st Century* (p. 9). Paris: UNESCO.

Transformative pedagogy is teaching which allows students to develop real-world solutions to real-world problems through their own youth-led initiatives. Transformative pedagogy is the antithesis of the student as a passive recipient of "school" knowledge. Rather, according to British authors of the handbook *Curriculum and Teaching Innovation: Transforming Classroom Practice and Personalisation* Ben Williamson and Sarah Payton, the student is "socially active and participative, democratically bringing existing knowledge and ideas into the classroom that are worthy of consideration in the curriculum". Williamson and Payton go on to say that transformative pedagogies and student voice challenge the idea that "adults are 'human beings' while children are just 'human becomings'; that adults are complete, independent and self-controlling and children incomplete and dependent".[15]

This student-centred approach emphasises children's competence in their own social lives and suggests that in schools there should be a democratisation of curriculum planning processes that accept children's own views, experiences and interests as worthy of consideration in the classroom. Attempts to do so are often referred to as "student voice" initiatives. They allow children and young people to have a say in curriculum design and classroom pedagogy. However, according to Williamson and Payton, student voice is not straightforward, because it calls into question the existing power relations between adults and children, or teachers and students, within schools.[16]

If children these days, then, are increasingly active participants in media culture and in diverse social worlds, able to make their voices heard and to have a say in shaping their own personalised learning, what does this imply for teaching? Williamson and Payton have defined the "good teacher" who fosters student voice, as one who "must be able to orchestrate the classroom using both a fresh understanding of curricular aims and an appreciation of the lives of children".[17] This paper also argues that teachers today should have an appreciation of the impacts on their learners of complex global issues and an understanding of what they can do to foster student-led creativity and innovation.

In a 2015 interview for the Association of Heads of Independent Schools of Australia (AHISA) journal *Independence*, internationally renowned education expert and author Professor Yong Zhao suggested that what Australia doesn't need is a one-size fits all Australian Curriculum, but rather "more personalised experiences for students". Professor Zhao argued that "education in the 21st century is all about starting from the children; it is about following the child, supporting the child – enhancing their strength, supporting their passion and uncovering their creativity – rather than imposing upon everybody a generic set of knowledge or skills".[18] He reflected on the small number of innovative schools operating on "the periphery" around the world which are trying different approaches that support "truly authentic, product-driven, project-based learning that engages students in making meaningful things and in doing so, making sure all their years in school are as if they are living their lives". Professor Zhao said these schools embodied and practised what curriculum theorist John Dewey espoused in an earlier century: "education is not preparation for life: education is life itself".

15, 16, 17 & 21 Williamson, B., & Payton, S. (2009). *Curriculum and Teaching Innovation: Transforming Classroom Practice and Personalisation.* (pp. 41, 43, 45 & 49). A Futurelab Handbook by Futurelab

A natural place for educators to start designing curriculum is from a student's curiosity about the world. Engaging with and stimulating this curiosity is at the heart of inquiry learning. Melbourne education consultant Kath Murdoch, who has 20 years' research and teaching experience in inquiry-based learning and integrative curriculum, says that at its heart "inquiry is all about thinking – thinking in order to make meaning." [19]

Research confirms the benefits of inquiry learning and its role in supporting the integration of subjects and capabilities. Ms Murdoch says "when it is well conceptualised and rigorously planned, an integrated unit of inquiry, by its very nature, challenges students to think at higher levels. At the heart of the inquiry process is the task of helping deepen students' understandings by guiding their thinking about lower level 'facts' through to concepts and, ultimately, to higher level, transferable generalisations. While this 'scaffolding' process has been accepted for many years, we are becoming aware of the need for teachers to articulate it much more explicitly to students. This conscious 'spotlighting' of thinking provides a very exciting and challenging layer to the work teachers and students do in an inquiry." [20]

Teaching that allows for some unplanned "chaos" as students explore what is important for them is founded on mutual respect and trust between adults and children; it goes beyond the idea of the teacher as "fun", "likeable" and able to make learning interesting. Instead, it promotes the idea of teachers as equal participants in the classroom, negotiating with students what gets taught and how it gets done, for example through inquiry learning, whilst also bringing to that encounter a great wealth of subject expertise, contextual knowledge, and understandings about the processes through which different children learn.

An innovative approach to the curriculum founded on this model of relationships in the classroom would, necessarily involve the participation of students in its design, planning and running. According to Williamson and Payton it would see students as "curriculum co-designers" bringing into the classroom ideas worthy of further consideration and exploration.[21]

The increasing economic, social, political, environmental and cultural challenges of globalisation mean that schools have a responsibility to support young people to understand and respond to complex global issues in their everyday lives in a way that engages them, scaffolds their learning and deepens their thinking.

This paper has put forward for discussion and reflection an approach to the curriculum which: gives serious attention to the explicit inclusion and instruction of general capabilities and internationalisation; favours transformative pedagogies that amplify student voice; and incorporates inquiry-based learning.

18 Association of Heads of Independent Schools of Australia. (May 2015). 40-year anniversary interview series for the journal *Independence*. Interview between St Peter's College headmaster and Professor Yong Zhao.

19 & 20 Murdoch, K. *Inquiry Learning – Journeys through the Thinking Processes*. Website slides from learning assets workshop.

Taking curriculum inspiration from a time machine

Glasshouse Christian College

"If we want to be relevant to the students in front of us over the next decade, we must get away from teaching students how to be taught and start teaching them how to learn for themselves."

Inspired by the Hollywood movie "Back to the Future", Year 10 students and staff at Glasshouse Christian College partnered in 2016 to develop an ambitious project to better prepare students for the future.

The Prep to Year 12 school, which is located on the Sunshine Coast, developed the "DeLorean Project" to better equip students to navigate a world which is also undergoing its own metamorphosis. The goals of the program centre on building the capacity of students to become critical and creative thinkers and more globally and socially responsive citizens – key capabilities identified in the Australian Curriculum.

Dean of Studies Rob Steffler admits Glasshouse, like many other schools, has been preoccupied with getting through the content in the curriculum and hasn't given the general capabilities "the credence they deserve".

The year-long DeLorean Project addressed this gap by challenging students to lead their own learning, connect with the community and contribute to the world around them. This involved students identifying a need, issue or problem; investigating the entrepreneurial or business strategies required to address the issue; and nominating the technologies they would use in their solution. Student groups then presented their concepts to a "Shark Tank" of local entrepreneurs and business people.

Mr Steffler says the ideas which emerged were "amazing", including a new iPhone accessory product which changed colour by touch and a smart pet collar that alerted owners to a lost pet. However, Mr Steffler admits the project was challenging for both staff and students.

"Some students learned about perseverance and overcoming roadblocks, while others discovered more about themselves and how they deal with and learn from failure," he says.

"The learning and self-reflection students went through during the process was far more valuable than the end product they created. This was the epitome of the project."

"For the teachers involved, it was a departure from the safe and comfortable teaching approaches of old. It showed us what teaching might look like in the not-too-distant future and allowed us to experience what we had asked of our students, which was to work as a team, problem solve and collaborate. It has also made us re-think how our traditional subjects might operate and how our role as teachers within these subjects could change."

Conclusion

In order for our young people to grow up to be successful workers and citizens, they need to be equipped for a globally innovative world. For nations to be successful economically and socially, they need workers and citizens who can contribute to the increasingly innovative and competitive world economy. Our young people need "world class skills". They need to be more functionally literate and numerate, as well as better equipped with the capabilities to be flexible and adaptable in internationalised contexts. A truly innovative curriculum would assure all children equal entitlement to this knowledge and these skills, and it would do so through an appreciation of the social, cultural and local needs of the children.

The process of disentangling "curriculum innovation" means independent schools could be paying special attention to all three pillars of the Australian Curriculum while challenging the automatic authority of subject areas to control the timetable. In the process they could also be noting the emergence of new international, societal and political drivers and imperatives; the proliferation of new influences and expectations in the "New Normal"; and developing responses at the classroom level that genuinely give students agency and actions to practise cosmopolitanism.

The premise of this paper has been that traditional curriculum designs can reflect poorly on the needs, interests and engagement of children and, contrary to governments' beliefs, are unlikely to provide the "smart workers" and economic foundations for the security of Australia's future. A new grammar of schooling is required to meet the needs of our young people as they move, work and live in a "New Normal" world of increasing connectivity, destabilisation, radicalisation, turmoil, change, cultural and societal shifts, environmental challenges and global impacts.

It seems ironic to look to a man promoting his theories on curriculum more than 100 years ago, when this paper has argued that our young people are now experiencing a "New Normal" that challenges many aspects of our society, economy, lifestyle, work and education structures. It says much for the man's vision that John Dewey is recommended for his insights into a model of curriculum.

There are no simple answers for policy makers or schools because the questions being asked are difficult ones. However, it is incumbent on all who work in education, including independent schools, to begin the hard conversations, to develop shared imaginations about what might be, instead of what has always been, and to take brave steps towards uncertain futures through innovations in the curriculum.

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