Development of a set of principles to guide a P–12 syllabus framework

A report to the
Queensland Studies Authority
Queensland, Australia

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EXECUTIVE SUMMARY

The aim of this project is the development of a new design template for P-12 syllabi for Queensland schools. The project consists of an international literature review, a series of commissioned expert papers, and a review of recent developments in Queensland curriculum. The project reviews international and national literature on curriculum, school reform and improvement, and comparative policy contexts. The focus of this review is on the technical features of syllabus documents that contribute to "high quality/high equity" outcomes. It does not comment on ongoing debates over curriculum content in specific subject areas.

Key issues discussed in this report include:

- The technical form of the curriculum – the formal definitions, categories and taxonomies of the syllabus – have direct and indirect impacts upon teacher professionalism and student outcomes.

- The syllabus offers a 'map' of the curriculum, but cannot prescribe the sum total of curriculum, pedagogy and assessment in the school or classroom.

- School subjects are distinctive purpose-built and targeted units of study, constructed in response to different demands and challenges and towards educative ends. School subjects are the operational units for syllabi.

- School subjects can have different and variable relationships to disciplinary knowledge and applied fields, depending on their aims, contents and developmental phases.

- High quality/high equity education systems are characterised by a balance of "informed prescription" and "informed professionalism".

- Informed prescription entails an economical syllabus that maps out essential knowledges, competences, skills, processes and experiences, parsimonious and appropriate testing systems for diagnostic and developmental purposes and systems' accountability, and a strong systemic equity focus on the potential of all learners to meet high expectations and standards.

- Informed professionalism involves teacher autonomy to interpret the syllabus, with opportunities for local curriculum planning, rich professional resources and development activities, school and classroom-based assessment capacity, and professional capacity to adopt curriculum for teaching and learning of identified equity groups.

- Each syllabus for a school subject can span the early, middle or senior learning phase, and thus be aligned with the distinctive educational philosophy of each phase.

- Each syllabus would have guiding statements of philosophy, aims, recognition of distinctive learner cohorts and their needs, brief statements of essential expected learnings, related standards, and some details of approaches to assessment. It would be in language accessible to teachers, and it would be as brief and to the point as is possible and appropriate.

- Essentials could be stated as blends of knowledge, behaviours, skills, competences, capacities, processes and experiences, depending on the subject, phase and field orientation that they relate to.

- Standards, using a common nomenclature, would provide a vocabulary for teachers, students and parents to describe and discuss student achievement and results.

- Syllabuses can include brief notes of assessment practices and strategies, appropriate to the subject and phase, to guide the development of systemic, school and classroom assessment and moderation (where appropriate). They indicate where systemic standardised testing programs and mandated moderated assessment are linked to essential learnings.

- Foundational discipline and field knowledges, specific pedagogic strategies, curriculum and instructional adaptations for specific cohorts of students would be provided in adjunct, on-line resources - and not be part of the publicly accessible syllabus.

A key axiom in all studies of policy, curriculum and instruction is that the official syllabus document cannot in itself change classroom practices and student achievement.

The success and effectiveness of the proposed design in improving quality and equity will depend upon other settings of policy and practice at the system and school level.

The proposed syllabus design will require various specific 'delivery standards' to effectively improve quality and equity of outcomes. These policy alignments will include: an inclusive, consultative and research-based syllabus development process; alignment with curriculum methods subjects in preservice education; teacher and administrative professional development in curriculum; rich and quality assured professional resources, available from multiple sources, as a way to support teachers in interpreting and developing local curriculum in relation to the syllabus.

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A SET OF PRINCIPLES TO GUIDE A P-12 SYLLABUS FRAMEWORK

What should be the design of the syllabus documents for school subjects in Queensland? The aim of this project is a design template for P-12 syllabi for Queensland schools. It draws together foundational and empirical research from curriculum studies, comparative education, and educational sociology, from the current literature on accountability, school and systems reform.

The document fits within the strategic directions of the QSA by:

- supporting the implementation of a P-12 approach to syllabus development;

- providing authoritive, representative, evidence-based policy advice on key education matters to key stakeholders; and

- ensuring that the QSA responds to the opinions and needs of the education community.

This is a defensible case for a syllabus model that aims for a balance of "informed prescription" and "informed professionalism" with the aim of "high quality" and "high equity" educational outcomes (Schleicher, Appendix A). Our position is that the technical form (*not* content per se) of the syllabus can, when properly supported, set the school and classroom conditions for improving outcomes and results for all students. Conversely, uniformed or excessively "hard" prescription can decrease "informed professionalism" and deter both quality and equity. The model presented here provides a way forward through current debates over curriculum content, and a practical approach to the curriculum development, implementation and support approaches of the Queensland Studies Authority and employing authorities.

For this task, we have commissioned 7 expert papers by leading curriculum scholars and researchers from Canada, the US, Hong Kong, France and Australia. Each of these papers addresses a key issue facing Queensland curriculum. We requested that authors write accessible discussions of current developments, indexing key work to support their positions. These papers appear in Appendix A, but they are cited throughout the report in italicised text boxes.

The format of this report is a series of key propositions about the design of the Queensland syllabus. We use the commissioned papers and an international review of research to support the claims. We also cite our observations from onsite fieldwork that we have undertaken on the Ontario curriculum. The report concludes with a summary overview of the proposed design to guide the future development of P-12 syllabus documents for Queensland schools. Appendix B includes background reviews on current Queensland syllabus documents and curriculum development processes. We have placed this overview of current QSA syllabus documents, internal reports and debates in Appendix B for optional reading. This review is a crucial foundation for the present task.

But our primary brief was to establish benchmark practice in syllabus design that aligns with the broad goals of the Queensland system for excellence and equity, high quality and high equity student outcomes.

Consequently, we make a fresh foundational and empirical case for a syllabus design based on international findings, directions and benchmarks – rather than critique or endorse current practice that has historically evolved through the last 35 years of Queensland curriculum-making.

The report begins with definitions of key terms and a discussion of the context for curriculum change. It then explains the key principles for the proposed P-12 syllabus design. The design is accompanied by recommendations for the syllabus development process, the provision of adjunct professional resources, pre and in-service professional development. This is followed by the appended research papers (Appendix A). The report concludes with an appended descriptive review of Queensland curriculum practices (Appendix B) and a review of literature in the field of syllabus (Appendix C).

TECHNICAL FORM IS NOT CURRICULUM CONTENT

Our focus is on the *technical form* of the curriculum: the conceptual structures and systems, the categories and taxonomies that are used in syllabi to describe what should be taught and learned in schools. Different national and state systems use different categories, formats, and levels of detail in their syllabi.

The technical form of the curriculum matters. Three decades ago, Michael Apple (1978) made the case that the over-specification of curriculum through directive syllabi,

packaged materials and instructional "scripts" has the potential to "deskill" teachers, deterring their professionalism and inhibiting the quality and equity of instruction. Patrick Shannon (Appendix A) shows how the technical form of the curriculum sets the "locus of curriculum authority". This locus can rest by degrees with the mandated curriculum commodity package, it can rest with the mandated approach, it can rest with the 'test' in test-driven systems, or it can, optimally, rest with informed professionals interpreting informed central prescription. The technical form of the curriculum constrains and specifies the delicate policy balance of what the OECD refers to as "informed prescription" and "informed professionalism" (Schleicher, Appendix A). This balance is central in the literature on different approaches to accountability and systems governance (Nichols, Glass & Berliner, 2005; Welner & Oakes, 2007), in the literature on sustainable school reform (e.g., Fullan, 2008), in the literature on teacher development and professionalism (Cochran-Smith, 2001; Timperley, Wilson, Barrar & Fung 2007) and in recent work on educational policy reform (Barber & Sebba, 1999; Levin, 2008). Further, the achievement of this balance is central to current state and national educational policy debates over quality and equity.

The commissioned papers in this report make the case that some forms of syllabus design and prescription deter the achievement of high quality and high equity systems and that others enhance teacher professionalism and, accordingly, improve the prospects of quality and equity of outcomes. The danger is that "uninformed prescription" (Schleicher, Appendix A) or "hard prescription" (Welner & Oakes, 2007) – characterised by over specification of the curriculum, continuous monitoring and enforcement through high stakes testing, and punitive approaches to accountability - can deskill teachers and deter quality and equity (Nichols & Berliner, 2007). That is, *strong curriculum policy bids to control what goes on in classrooms through curriculum prescription, and enforcement through testing and accountability can generate inverse and unintended effects*, deterring the informed professional judgement that is necessary for schools and teachers to engage in local curriculum development, implementation and assessment practice (Klenowski, Appendix A).

As Schleicher argues using current PISA data (Appendix A), high quality/high equity systems balance the central setting of expectations and standards, the careful and parsimonious use of a range of accountability measures, with coordinated systemic

resourcing of professional development and training, appropriate technology, and explicit policy and practical attention to students from socio-economically marginalised and minority backgrounds. Schelicher strongly defends those equity policies that focus on high learning expectations and well-resourced instruction for target groups. In our discussion of standards, we later refer to these and other policy alignments that enable quality curriculum as "delivery standards".

It is our view that the technical form of the syllabus is a neglected area of current curriculum debates that have largely been preoccupied with questions of curriculum content - variously construed as cultural values, ideologies, specific skills sets, competences and disciplinary knowledge.

This report does not prescribe or describe curriculum content. It does not address the important cultural, intellectual, cognitive, social and economic questions about which school subjects, which knowledges, skills, competences and capabilities should be included in the curriculum. Instead, it provides a programmatic, principled, and educationally defensible direction for the shape, structure and purposes of Queensland syllabus documents. It also provides important descriptions of curriculum development processes, teacher education, professional development resources and infrastructure, and other key policy supports that would need to be in place to ensure the effectiveness of the proposed model in improving quality and equity.

This report then focuses on how to develop, structure and support the ***official syllabus***. It defines the syllabus as a map and descriptive overview of the curriculum, as a structured summary and outline of what should be taught and learned. Yet the syllabus is *not* the curriculum.

In this report, we define ***curriculum*** as the sum total of resources - intellectual and scientific, cognitive and linguistic, textbook and adjunct resources and materials, official and unofficial - that are brought together for teaching and learning by teachers and students in classrooms and other learning environments. Taken in its simplest terms, curriculum is simply what is taught and learned in schools (Kelly, 2004). It is the very constitutive cultural and scientific 'stuff' of education that is "transmitted" by the message systems of instruction and assessment (Bernstein, 1990). The syllabus is a bid to shape and set the parameters of the curriculum. But by definition, it cannot contain and express, control and micro-manage what goes on in the classroom.

What occurs in teaching and learning is shaped by a range of factors. The official syllabus is one key factor. Other factors include but are not limited to: the background knowledge, cognitive and cultural resources that students bring to classrooms; teacher expertise gained through pre and in-service teacher education and practical experience; textbook selection and content; availability of further training and professional resources; school leadership; system governance and accountability structures; high stakes testing and examination; classroom assessment; available financial resources; the physical site of the classroom, and so forth (see articles in Pinar, 2005; Connelly, He & Phillion, 2008). Even if educational science can identify 'effective' and 'appropriate' curricular programs and teaching methods – real change in pedagogy, and therefore change in student outcome patterns, is dependent upon how these come together in the social ecology of schools and classrooms (Raudenbush, 2005).

This distinction between syllabus and curriculum is not a trivial one. The conflation of the roles and structures of the syllabus and the curriculum is a practical problem for policy-makers, teachers and parents. At present, some Queensland syllabus documents are, indeed, syllabi: relatively low definition outlines of what is to be taught and learned, with specifications of standards. Other Queensland syllabus documents attempt to capture, describe and prescribe the total curriculum experience. These are defacto mini-courses in foundational and field knowledge, in pedagogy and assessment.

The confusion of 'syllabus' and 'curriculum' creates a number of problems. First, the inconsistency in format and depth means that the relative roles of informed prescription and informed professionalism are unclear, varying field-by-field and level-by-level, school and classroom-by-classroom. Second, it means that the degree with which the curriculum can be publicly scrutinised and interpreted by professionals and parents, media and communities varies greatly subject-by-subject. We hypothesise that the balance of informed prescription/professional judgement varies greatly within schools and across the system. Various QSA studies of specific subject syllabi report that teacher engagement, uptake and use of the syllabus is extremely variable, with some teachers quite familiar and skilled in using the syllabus to make the curriculum, and others having little or no engagement with the syllabus (e.g. Land, 2007). The ongoing public debates over the curriculum are sometimes based on what is written in syllabi,

sometimes on particular test content, or anecdotal or hearsay claims about what goes on in classrooms (Snyder, 2008).

The technical form of the syllabus has been neglected in current curriculum debates. How the syllabus is shaped, how it is used in the context of system accountability around standards, and how teacher use of the syllabus is resourced and supported sets conditions for a balance of "prescription" and "professionalism". Establishing that balance in ways that are conducive to high quality with high equity teaching and learning is the task facing policy makers and teachers.

The expert papers here identify common elements of successful "high quality/high equity" systems (OECD, 2005). These include:

1. low definition, clear, accessible and shorter syllabus documents that specify core knowleges, skills and competences as 'aspirational' targets (Schleicher, Shannon, Levin, Connelly & Connelly, Appendix A);

2. syllabi that provide a common and transparent professional vocabulary for standards (Schleicher, Levin, Klenowski, Appendix A);

3. parsimonious and appropriately used testing and examination systems (Klenowski, Schleicher, Levin, Appendix A);

4. a system-wide emphasis on building teacher professional capacity to enhance local school and classroom-based curriculum planning and assessment practice (Schleicher, Levin, Klenowski, Connelly & Connelly, Appendix A);

5. a focus on the specific learning needs and challenges for children from socioeconomically marginalised communities (Schleicher, Levin, Shannon, Appendix A) and of distinctive age/phases of cognitive and social development (Alvermann & Marshall, Appendix A).

Across this report, we describe elements of national and state/provincial systems (e.g., Finland, Ontario) that have achieved such a balance. The commissioned papers also note some systems (e.g. US, Hong Kong, Germany) that are have difficulty achieving the right balance.

Therefore, while this report proposes a syllabus design, the success of that design at enabling and enhancing quality and equity depends on the effective alignment of other

policy settings in teacher education, professional development, school resourcing, governance and leadership and assessment. After proposing the design, we outline these conditions in a concluding section entitled "Policy Alignments Required for this Model".

WHAT IS A SYLLABUS?

The syllabus is a defensible map of core skills, knowledges, competences, capacities to be covered, with affiliated statements of standards. These, in turn, need to be visibly aligned with systemic, school and classroom-level assessment practices.

As noted above, there has been some confusion between the syllabus and the curriculum. In current terms, Westbury (2008) defines the syllabus as a "guide" to the curriculum while Schwartz (2006) describes the syllabus as a "written curriculum" that acts as an action-oriented "guide" or "tool" for teachers.

As noted in Appendix C, there is little technical literature on syllabus design. What is available is primarily from the fields of university teaching, English-as-a-Second-Language, and adult and vocational education.

The *Oxford English Dictionary* tells us that the term "syllabus" has evolved to refer to a "summary" of what is to be taught and learned. The Greek etymology of the word refers to the verb "to collect". Cicero used the term to refer to "correct leader", suggesting an authoritative status. In the 17th century, the term referred to the finished curriculum or a course of study completed. By the 19th century, the term was used to refer to a statement, a table of contents, or "heads of study". The syllabus was used in fields like literature and law to refer to a "map" or "outline" of curriculum. The syllabus has traditionally been defined at one level of technical generality from the actual 'stuff' of curriculum content – forming an authoritative outline, schema or structure for courses of study. Because of the lack of conceptual clarity in defining a syllabus, all of these historical definitions are merged, often without clarity, in teachers' and curriculum developers' work.

We define the syllabus as an official map of a school subject. That is, it provides teachers with a rationale and outline of the school subject in question, an overview and specification of preferred expected 'stuff' to be taught and learned, and description of operational ways of appraising standards for gauging student performance. The

expected learnings can be stated in various forms (e.g., as knowledge, skills, competences, processes and experiences).

Note that in Finland and Ontario, the syllabi content statements blend and mix descriptions of traditional knowledge contents, behaviours and skills, global competences and more general capabilities, essential educational experiences and processes. They do not restrict themselves to strict statements of behavioural objectives or disciplinary/field contents. While they provide general statements of the philosophy of the school subject and learning phase – these syllabi do not describe or prescribe pedagogical approach in any detail. In both systems, the local adaptation of curriculum pace, unit planning, and actual classroom pedagogical choices and instructional methods are left to teachers' professionalism, with adjunct resource materials available from authorised various sources.

Based on Dewey's (1902) seminal definitions, we argue here that the syllabus constitutes a map of the terrain to be covered. Following Dewey's metaphor, the syllabus is not an exhaustive view of the territory, but it sets the grounds for teachers' and students' actual educational journey through the terrain. As will be discussed later, standards set the grounds for judging the quality of the journey. ***Teacher professional judgement in the shaping of curriculum work programs, pedagogical approaches and classroom assessment allows and enables individuals and cohorts to take different routes through the terrain.***

The syllabus is not and cannot be comprehensive or exhaustive, and it cannot and should not prescribe and dictate pedagogic method, approach, style and instructional interaction. This is optimally the domain of school and teacher professional judgement (Fullan, 2008; Newmann & Associates, 1996). Further, Schleicher (Appendix A) uses PISA data to make the case that over-prescription can hinder "informed professionalism". Reviewing US literacy strategies, Shannon (Appendix A) describes the "locus" of curriculum authority as optimally residing with informed, adaptive highly professional teaching workforce (Corcoran-Smith & Demers, 2008).

> *One of the functions of a good syllabus document is to enhance teacher professionalism. In general, this will tend to occur where there is low guideline specification and relatively high teacher professionalism. But the relationship of expertise to content varies from subject to subject and from grade level to grade level.*
>
> **Connelly & Connelly, Appendix A**

The syllabus is an outline of preferred expected knowledges, skills, performances, competences, with affiliated specification of expected standards. It should act as a 'guide' for "informed prescription", and as such is optimally supported by diverse, well-developed professional training and development resources and targeted professional development and support (for reviews, see Feinman-Nemser, 2001; Timperley, Wilson, Barrar, & Fung, 2007). These resources then can be assembled, developed, and applied by teachers in local curriculum planning and designing, a key element of successful systems in Finland and Ontario, and in many successful schools in Queensland (e.g., Department of Education, Training and the Arts, 2004; Australian Council for Education Research, 2007). Taken together – this range of processes and resources can set the conditions for an effective balance of informed prescription and informed professional action.

WHAT ARE SCHOOL SUBJECTS AND DISCIPLINES?

Each syllabus is the map of a school subject. We define a school subject as an institutionally defined field of knowledge and practice for teaching and learning (Stengel, 1997; Deng, 2007; see also Deng, Appendix A). Unlike disciplines, school subjects are "uniquely purpose-built educational enterprises, designed with and through educational imagination towards educative ends" (Deng & Luke, 2008).

The current Australian debates over curriculum content have polarised opinion between disciplinary experts (e.g., scientists, literary theorists, historians, geographers, mathematicians) and educational experts (e.g., teacher educators and curriculum developers). These debates have confused 'school subjects' – key learning areas in specific fields - with 'disciplines'.

School subjects are "different from but related" to disciplines and practical applied fields of knowledge (Deng, Appendix A). For school syllabi, the traditional, operational

and practical unit of study is the school subject - not the 'discipline' or 'field' of knowledge per se. School subjects have different connections to disciplines and disciplinary knowledge (Shulman, 1986), to culturally or scientifically important tools, artefacts and texts (Cole, 1996), and to particular cultures and cultural knowledges (Ladson-Billings & Brown, 2008).

School subjects also reflect particular 'versions' of related disciplines and applied fields. The syllabus, therefore, involves a motivated selection from: (a) identifiable intellectual, scientific and aesthetic paradigms within a traditional or emergent field or discipline and/or (b) particular approaches to an applied domain of practice (e.g., workplace or professional competence). The contents of a syllabus are a "selective tradition" (Apple, 1978), conscious and deliberate inclusions and exclusions from a vast range of possible contents available.

> *School subjects are distinctive purpose-built enterprises, constructed in response to different social, cultural and political demands and challenges.*
>
> **Deng, Appendix A**

We acknowledge the foundational significance of disciplines as human technologies for describing and understanding the world, as historically evolving institutions, and as specialised discourse practices. Disciplines are ways of thinking about, construing and describing the world (Cole, 1996; Freebody, 2006). As defined by Aristotle, disciplines are purpose built to address scientific and cultural problems, to describe and explain a particular domain or field in the world. They entail specific epistemological stances on the world, commensurate first principles, relevant procedures and methods, and distinctive goals and aims (McKeon, Owen, & McKeon, 2001). They also are constructed and structured through purpose-built discourses, technical vocabulary, spoken and written genres, and ways of representing the world (Lemke, 1990). By definition and necessity, disciplines evolve and change in response to new theories, new problems and changes in the phenomena they attempt to describe. This applies to both scientific fields (Kuhn, 1962) and to cultural and aesthetic fields (Dewey, 1938). At any given time, there is both consensus and dissensus - shared and contested claims amongst the practitioners of any field or discipline.

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School subjects are related to, but not the same as disciplines and practical fields. The relationship between discipline and school subject is discussed by Deng (Appendix A). Unlike disciplines, school subjects occur in a distinctive institutional context (schools and classrooms), and they mark out a particular set of social and cultural educative goals (a social logic) for distinctive groups of people (a psychologic) (Dewey, 1902). They may draw upon the stances, principles, procedures and goals and aims of particular disciplines (Tyler, 1949; Deng, Appendix A). School subjects, therefore, are purpose-built and targeted units of study – and their technical form and contents must address specific institutional imperatives and contexts. Unlike disciplines, school subjects also set the grounds and directions for the social interaction and knowledge-making that occurs in teacher/student classroom interaction.

The school subject has a variable relationship to disciplinary knowledges or to applied fields of knowledge. The relationships between school subjects and their disciplinary or practical fields are variable, depending on subject and phase. In a key work, Stengel (1997) argues that school syllabi and curriculum can take different stances in relation to their foundational fields. Curriculum can be based on the assumptions that:

(1) academic disciplines precede school subjects;

(2) school subjects precede academic disciplines; or

(3) the relation between the two is dialectic. (Stengel, 1997)

School subjects may – depending on the KLA and the phase of learning – reflect different relationships to discipline and applied fields. For example, it may be that in some school subjects (e.g., senior science) the linkages between traditionally construed disciplinary knowledge and the content of a school subject might be direct and strong. In contrast, the linkage in primary science might be more indirect, mediated by issues of early childhood development, student background knowledge and pedagogical variables. In the middle years, developmental issues of cultural and individual identity, motivation and engagement may shift knowledge classification towards a stronger emphasis on practical, activity-based knowledge (Alvermann & Marshall, Appendix A). To take another example: in aerospace studies or marine studies, the linkages might be to multiple disciplinary fields unified as an applied field. In a school subject like hospitality and tourism there will be minimal linkage to a traditional discipline but strong linkages to an established field of practical knowledge. So the linkages between

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school subject and discipline may vary by specific school subject and by age/grade/phase level.

This project identifies some programmatic conditions for the design of the syllabus for a given school subject: the parameters for a technical form for the Queensland syllabus documents. The syllabus sets the parameters for the curriculum, attempts to constrain and direct the curriculum, and is a bid to shape and influence the "enacted curriculum" (Ball & Cohen, 1996) or the "curriculum in use" (Luke, deCastell & Luke, 1989). But empirical studies have shown that in and of itself the syllabus does not and cannot fix or determine outcomes or learning per se (Westbury, 2008). This depends on a range of other factors out of the control of the curriculum developer: the alignment of the other message systems (pedagogy, assessment), macro policy contexts and pressures, space and incentives for teacher curriculum work, professional capacity and curriculum resources at the school and teacher level, and a range of other school and external social variables (Welner & Oakes, 2008; Fullan, 2008).

THE PROPOSED SYLLABUS DESIGN PRINCIPLES

In agreement with Schleicher (Appendix A), our view is that the informed prescription/informed professionalism balance cannot be achieved by incrementally more explicit and more detailed prescription within syllabus documents. Longer, more detailed and extensive syllabi are not the answer, However one of the collateral effects of attempts in Australia to manage increased curriculum prescription since the *Adelaide Declaration* (Ministerial Council Education Employment Training and Youth Affairs, 1999) has been an incremental expansion of the volume and contents of syllabus documents.

This move towards higher, more explicit definition has not necessarily led to better or more informed professional practice. Increased high-stakes testing will direct teachers to teach to the test, but the risk is that the test will become the syllabus (Klenowski, Shannon, Appendix A) – signalling to teachers which parts of the syllabus are to 'count' in comparative analysis of student, teacher and school performance and which parts of the syllabus are to be backgrounded and, potentially, lost from teaching and learning. Expansion of syllabus documents will not provide a solution to this risk. Nor are better results likely to be achieved by a simple adoption of what Deng (Appendix A) calls the

"doctrine of disciplinarity" – that is that the answer is to simply bring school subjects and their syllabi into more literal alignment with more detailed disciplinary knowledge.

Following the general argument for a balance of informed prescription and professionalism, we propose the following basic design principles for the syllabus.

THE LOGIC OF THE SCHOOL SUBJECT: That the syllabus include a statement of the philosophy and logic of the school subject it describes, noting key developments and benchmarks in research on the subject. This would enable curriculum developers to choose stronger alignments with disciplines and applied fields, or more loosely coupled and multidisciplinary relationships. It would require that they work through and state these relationships explicitly.

THE SOCIAL LOGIC OF THE SUBJECT: That the syllabus include a statement of the overall educational purposes and goals of the school subject, noting the benefits and value of mastery of the subject and its affiliated learnings. This would enable curriculum developers and teachers to consider how and where mastery of the school subject fits into the philosophy of the system, the purposes and processes of specific phases of schooling, and the overall goals for the development and pathways of students.

THE PSYCHOLOGIC OF THE SUBJECT: That the syllabus includes a statement on the diverse communities of learners (e.g., by gender, language, Indigineity, age, location, special needs) and variable consideration required to provide equitable access to the curriculum content to all students. This would entail consideration of the learning characteristics and approaches of particular age/phases. It would enable curriculum developers and teachers to consider how to shape the delivery of the syllabus and select appropriate resources that match student age/phase, background knowledge, cultural and linguistic diversity, approaches to learning and prior achievement. It would enable curriculum developers and teachers to consider how to shape curriculum and instruction in relation to the distinctive resources and challenges of Aboriginal and Torres Strait Islander students. It would dovetail with policy foci on equity and provide the explicit equity focus that characterises high quality/high equity systems.

EXPECTED LEARNINGS: That the syllabus include clear, simple and economical statements of expected learnings. These could be framed as a relevant and defensible combination of: knowledges, skills, behaviours, performances, experiences,

competences, and capacities, detailed in language technically accessible and useful for teachers. This would enable curriculum developers to flexibly focus and define the content of specific school subjects according to different curriculum models. It would enable teachers to select instructional approaches and assessment practices that fit the learners and the expected learnings.

STANDARDS: That the syllabus include a common nomenclature for describing student performance in the subject. These would be framed as 'aspirational goals' for students and teachers. Optimally, they would act as indicators of 'generic' or 'essential' learnings across ages/grades and school subjects. They would provide the system, teachers, parents and students with a common, accessible vocabulary for gauging their learning.

ASSESSMENT: That the syllabus guide the development of systemic, school and classroom assessment and support the alignment of these practices with common standards. Alignments and misalignments with standardised testing, common assessment tasks and other systemic instruments would be noted and clarified.

> *Knowing the content of a school subject involves knowing more than the content per se; it entails knowing how the content is selected formulated, framed and transformed in ways that render meaningful and educative experience for students. This knowing is crucial for disclosing the educational potential inherent in the content.*
>
> Deng, Appendix A

We began with the claim that the syllabus is not the curriculum. The syllabus we propose would stand as a map. It would aim towards 'low definition', parsimonious and economical statements – avoiding lengthy lists of outcomes, content or skills, and long pre-service style introductions to foundational knowledges. The syllabus can guide and enhance professional expertise – but it cannot act as a substitute for well-resourced and informed teacher pre and inservice development.

Furthermore, the combination of 'low definition' syllabi and rich adjunct professional resources provides the system with more flexibility in responding to change in the field and to controversy over content.

To achieve informed professionalism – teachers would then turn to authorised professional development resources, approved and aligned textbook materials and

programs, web resources, and expertise gained and enhanced in pre and inservice training. The corpus of professional materials would be purpose-built for teachers' needs, vocabularies and technical expertise. It would be more readily modified and altered in response to new cohorts of students, cohort needs of teachers, change and innovation in pedagogy and field knowledge. But these professional development resources would *not* be included in the 'official syllabus'. This would make these resources – the basis for what Schleicher refers to as "knowledge rich" professionalism – adaptable, flexible and continuously under expert professional review. In what follows, we further explain the rationale for this structure.

BENCHMARKS FOR CURRICULUM DESIGN

Is there an ideal model for syllabus design? In another era, it might have been acceptable to simply refer to a specific model of curriculum design as the state of the art, according to the published literature. We might have claimed: 'Tyler (1949) proposed this model, it has proven durable and universally valuable and hence it is the 'state of the art that we should follow' or 'Spady's (1994) model of outcomes education is the international benchmark' or 'The US mandating of government approved curriculum packages has addressed equity issues' – and make an empirical or programmatic case for choices made. These approaches are responses to particular policy contexts, particular national histories and system contexts, and particular economic and social conditions (Alexander, 2001). Further, they are adopted in relation to particular pedagogic patterns, school and classroom structures (Stigler & Hiebert, 1999), intellectual and cultural traditions (Simola, 2005; Tobin, 2002). Models and prototypes from other contexts might have value in the Queensland and Australian context. But application requires evidence on their cultural and policy contexts, foundational principles, and affiliated effects (Luke, Graham, Weir, Sanderson & Voncina, 2006).

In another era, we could have referred to the consensual 'status quo' of current Australian state curriculum design. However, the curriculum settlements of the last decade are in transition. The demands of the new economy, the multicultural and multilingual nature of new student populations, and changes in educational philosophy, funding and governance have led to what is an unprecedented situation in the last half

century. ***There are no clear benchmarks in Australian education for syllabi that appear to set conditions for high quality and high equity outcomes with demonstrable consistency.***

There are two further principal problems to this approach. First, the literature on syllabus design is limited, developed principally in the fields of second language teaching, university teaching, adult and vocational education (Appendix C). There is an extensive published literature on curriculum theory, curriculum contents, curriculum development, curriculum management and implementation, systemic accountability and reporting, and teachers' and students' uses of the enacted curriculum in schools (for summaries, see the recently released *Sage Handbook of Curriculum and Instruction* (Connolly, He, & Phillion, 2008)). But there is very little written about the shape and structure of a school syllabus documents.

A second problem is that there is limited work on principles of the actual designs – taxonomies, categories and technical forms – of Australian state system curriculum documents. While states, territories, nations and other jurisdictions design curriculum documents according to typical consultative processes with stakeholders and subject specialists (Westbury, 2008), there is little actual theoretical, programmatic or even comparative analysis of the different formats and structures of Australian curriculum (Luke, Graham, Weir, Sanderson & Voncina, 2006). The ACER (2007) report on comparative state curriculum focused principally on comparing content in specific areas, concluding that there were areas of national convergence in curriculum content. The recent QSA report on essential learnings and capabilities in the Queensland curriculum also reported on content coverage of essential or generic capabilities rather than technical form (Gilbert & Macleod, 2006). Freebody's (2006) review of the Queensland secondary curriculum documented philosophic orientations of content, rather than technical form. These and other studies of Australian curriculum (e.g., Reid, 2005) provide little commentary on the efficacy of the "technical form" of the curriculum; that is, on the adequacy or relevance of particular approaches to taxonomies, structures and grids for shaping what should count as knowledge, and for effecting the enacted curriculum in classrooms.

The categories of the syllabus reflect concepts about knowledge and skill-acquisition, learning and child development. Their kinds and levels of technical specificity and

generality actually encourage and constrain particular uses of the syllabus for guiding practice, accountability and both systemic and local practices.

The technical form influences *face validity*: the credibility and perceived usefulness of the curriculum by teachers. In our fieldwork, Ontario and Finnish teachers reported that the syllabi were useful guides, helpful in giving them direction and empowering of their professionalism (Connelly & Connelly, Levin, Appendix A). By contrast, we hypothesise that a significant proportion of the teaching community in Queensland do not believe that specific syllabi are of use, while yet others do not read the documents at all.

The aim of the technical form of the curriculum, then, should be to stand as a form of "informed prescription" that enables and encourages "informed professionalism". We can backward map from high quality/high equity systems to infer the parameters of syllabus design that might enhance Queensland teachers' professionalism and students' equitable, high quality outcomes.

BALANCING PRESCRIPTION AND PROFESSIONALISM

An axiom of curriculum studies is that the *curriculum-in-use* generates efficacy and outcomes. The syllabus may enable and constrain, but does not necessarily reflect or index what is taught and learned in classrooms. The principal way that national debates have dealt with this is to debate the political, cultural and scientific values and truth claims of different stances on content – and to augment this with criticism of teacher workforce capability and professionalism. This approach leads to a dual policy approach: fix and mandate new (or old) content (change the "prescription"); enforce this through increased accountability pressure, incentives and disincentives for teachers (change the "professionalism"). This reflects the US policy approach. Nichols, Glass and Berliner's (2005) major study explains that increases in "accountability pressure" ratings such as those proposed in Australia have not in themselves led to improved quality or equity in national testing outcomes in the United States.

In this report, Andreas Schleicher, Director of Research for the OECD (Appendix A), refers to this as "uninformed prescription" that is linked to "uninformed professionalism". Uninformed prescription, he argues, may entail strong centralised accountability without the resources or the opportunities for building strong knowledge-

based and evidence-based teacher professionalism. He stresses the need for an approach to curriculum that lays out informed prescription centrally (through the syllabus setting core learnings and specification of standards) but that also sets the conditions for local teacher professionalism, school and classroom based developmental diagnostic use of evidence (Klenowski, Appendix A), and the exercise of local curriculum interpretation and translation, development and implementation. This is part of a process of upping the 'bar' for all students to achieve and raising expectations for learners (Levin, Appendix A) while encouraging a range of relevant pedagogical approaches. He refers to this as "informed prescription".

Schleicher's model favours the production of "adaptive" professionalism over "reproductive" professionalism (Darling-Hammond & Bransford, 2005). He claims that in high quality/high equity systems, teachers use professional knowledge and evidence to make informed and relevant decisions about teaching and learning. In other words, "informed prescription" depends upon teachers' professional capacity to locally interpret, adapt, and adjust curriculum content, pacing, presentation, interaction and structure to particular institutional, community settings and student cohort characteristics (e.g., Cochran-Smith, 1999). It includes a capacity to use evidence on student background, prior achievement, developmental and diagnostic progress, school and classroom-based assessment to make curricular and instructional decisions (Klenowski, Appendix A).

With strong targeted professional development and powerful system-based messages about equity, a specific focus on instructional adaptation of the curriculum for at-risk students makes a difference (Organisation for Economic Co-operation and Development, 2005; Schleicher, Appendix A). The literature on effective curriculum for cultural and linguistic minorities, Indigenous students and lower socio-economic students offers a clear lesson: that teacher quality and professionalism at the school and classroom level makes the most substantive difference (Ladson-Billings, 1997; Corcoran-Smith, 2001; Newmann & Associates, 1996; Gore, Williams & Ladwig, 2005). It also suggests that a clear system-wide focus on equity can work, when enacted through school-based curriculum and pedagogical foci.

> *Sustainable reform also focuses on increased public confidence in the public schools.*
>
> **Levin, Appendix A**

According to Darling-Hammond and Bransford (2005), adaptive professionalism entails the capacity to modify curriculum and generate new curriculum in relation to student cohort variables, and changing contexts and demands of knowledge fields. The uninformed prescription model, reinforced by testing for purposes of surveillance and quality control, mandates that teachers reproduce existing, mandated programs and approaches. Its most extreme form is in commodified curriculum packages, "teacher-proof" or "scripted" instruction, where the system attempts to 'micromanage' teacher/student interaction in the interests of quality assurance and accountability through curriculum prescription (Shannon, Appendix A). In the US context this has led to, at best, mixed effects on National Assessment of Educational Progress testing performance (Lee, 2006; Smith, 2008), and a host of "collateral" effects that include narrowing of the curriculum, teaching to the test, teacher deskilling and attrition, documented test score fraud and manipulation at the state and school level – with no visible sustainable effects at improving equity outcomes (Nichols & Berliner, 2007).

Schleicher argues that an emphasis on centralised standards and curriculum mandates must be balanced against high levels of workforce curriculum professional decision-making. Informed prescription requires well-resourced teacher professional capacity. His argument is that the high quality/high equity systems tend to strike a balance on the 'informed' axis (e.g., Finland, Canada, Sweden). Using PISA data, it is possible to claim that highly marketised systems with strong accountability, testing and compliance foci can lead to uninformed prescription/uninformed professionalism. In the case of the US and the UK, the documented results are high quality/low equity outcomes (McGaw, 2006). These, current OECD data further suggests, are exacerbated by larger between-school variance that reflects stratified socio-economic access to quality schooling (Schleicher, Appendix A). The approach of high quality/high equity systems, then, entails a balance of systemic standard setting and accountability with well-resourced, local school leadership with a strong focus on building teacher capacity at curriculum, pedagogy and assessment.

In the Ontario system, Levin (Appendix A) describes a simplification of messages and of curriculum focus as a way to enhance local teaching with improved equity outcomes.

Levin describes the overall policy settings for the Ontario system. He claims that centralised informed prescription needs to create enabling conditions for schools to focus on curriculum and instruction, with common vocabulary and messages around "expected learnings", standards and performance. The Ontario syllabi specify the curriculum in simple, accessible terms. Local curriculum development at the School Board, cluster and school level requires that teachers choose and adopt a broad range of resources and access a diverse but targeted professional development infrastructure. The Ontario syllabi provide a common nomenclature for assessing performance relative to standards across subject areas and age/grade/phase levels. Similarly, in Finland, each year teachers gather at the municipal level to undertake curriculum planning. In Finland, teachers enter the profession with Masters level training; in Ontario, teachers have systemic and financial incentives to upgrade their professional qualifications through further training.

These are crucial caveats on syllabus reform. Syllabi in and of themselves never have direct, hypodermic and unmediated effects on classroom instruction and assessment. They are part of the complex message systems of education (Bernstein, 1990), of curriculum, instruction and evaluation. These in turn can be differentially aligned, enabled and disenabled by other elements of educational structure and practice, ranging from teacher capacity and knowledge, professional support structures, school administration structures, system governance structures and school culture and ethos. As Welner and Oakes (2008) recently concluded in a major review of curriculum structure: "the relationship between structures and instruction is loose; the former can facilitate the latter but cannot dictate it" (p. 91). ***The aim is not only to establish a fine balance between prescription and professional judgment, but for the technical form and parameters of the central prescription to "facilitate" rather than "dictate" classroom pedagogy and assessment (Welner & Oakes, 2007).***

Ultimately, the challenge for modern education systems is to create a knowledge-rich profession in which those responsible for delivering educational services in the frontline have both the authority to act and the necessary information to do so intelligently, with access to effective support systems to assist them in serving an increasingly diverse client base of students and parents.

Schleicher, Appendix A

That is, once the educational goals of a system are established, the syllabi – its contents and technical form – can be part of the solution to high quality and high equity, but they cannot in and of themselves generate change. The syllabus can set the table and menu – but it cannot not cook and serve the meal. The syllabus has the important function of setting conditions for enhancing a "knowledge-rich" professionalism – but other policy settings also need to be in place. These include a clear and simplified message system about aims and priorities regarding quality and equity (Levin, Schleicher, Appendix A), professional infrastructure, workforce capacity, school governance and management structures that likewise are geared to enable instructional quality (Timperley et. al, 2005).

STATE AND NATIONAL CURRICULUM DEBATES: CURRENT INFLUENCES ON THE TECHNICAL FORM OF THE CURRICULUM

Developments in state curriculum have been subsumed by the debate over national curriculum. The debates of the last two years, however, have principally been focused on specific curriculum *content* areas, with polarised debates over the content of English and literacy, history, geography and mathematics. The debates have focused on bids around specific content, on university, employer and public claims about the knowledge and skills of graduates, on the influence of postmodernism and critical theory on the curriculum, and on the need for basic skills.

Both political parties, and the current Federal government, have made commitments to the development of a national curriculum. A national curriculum was initially proposed and envisioned in the 1990s (Marsh, 1996). The Adelaide Declaration moved towards a defacto national curriculum, with agreement between the states on a shared "outcomes-based" approach to curriculum and the development of models for benchmark literacy and numeracy testing at key junctures, that would enable state-by-state comparison as part of a comprehensive National Assessment Program. This Assessment Program was designed to measure progress towards achieving the goals for school education contained in the Adelaide Declaration. In 2008, national testing will be in place and the current government has agreed to establish a form of national curriculum, the format of which is as yet undecided. Again, much of this has been in the context of debates over curriculum content – with little commentary on the technical categories, levels of

generality/specificity and degree of prescription. The potential effects of the national and state testing systems on the enacted curriculum, on how teachers and schools selectively work through current syllabus documents has yet to be empirically documented. Whether they raise and focus standards, or create collateral effects (e.g., narrowing the curriculum) is as yet undetermined.

Yet in the context of a broader debate around accountability, governance and funding - the curriculum content debate has influenced the technical form of the curriculum. This has occurred in four moves:

1. The general and popular critique that the States' consensus to move to "outcomes-based" education in the 1990s has led to the dilution of quality, the "dumbing down" of standards, and the elimination of crucial content;

2. The call for new "cross curricular" and "generic" learnings (e.g., new basics, essential learnings, capabilities) to address the claimed human capital imperatives of the new "knowledge economies" and globalised labour markets;

3. The development of national testing in core areas; and, perhaps most importantly,

4. The ongoing critique of teacher education and teacher quality.

To reframe the current debates, we explain below how each of these has influenced the current technical form of the Queensland and Australian curriculum.

Technical form and different models of curriculum content

Current curriculum models begin from stances on content. But they explicitly and implicitly define the technical form of the syllabus. We here provide a thumbnail outline the dominant models of curriculum underlying current practice and policy debate. Note that we do not include commentary on the phenomenological model or other models of curriculum (cf. Green, 2005) that have had less direct influence on the state curriculum and syllabus definition.

The "outcomes-based" model was developed in the US by Spady and colleagues in the 1980s and 1990s. It argued that curriculum should focus less on the traditional selection and specification of knowledge content, and less upon pedagogic experience and process, and more on the specific visible and demonstrable outcomes in student performance. It marks out a "technocratic" model of education (Apple, 1990): an

industrial era model of curriculum derived from Tyler (1949) that breaks subject areas into smaller constituent parts based on claims about student "needs". Its technical form is enumerated categorical lists of outcomes for specific subjects and age/grades. These have tended, in the outcomes model, to be couched in behavioural terms; that is, as skills and behaviours that can be demonstrated and observed. This model is amenable to consensus-building, expert-committee and professional consultation processes. Its focus on lists of outcomes also enables a dovetailing with systemic testing for accountability purposes. The model has been strongly criticised by critical theorists, traditionalists and progressives. From radically different perspectives, they argue that it tends to atomise and narrow the curriculum, reducing its richness, and that it excludes a range of valued contents, experiences, learner backgrounds and pedagogical processes.

The process-based model, affiliated with the cognitive developmental work of Bruner in the post-Sputnik era, tended to treat curriculum in terms of a developmental continuum of educational experiences and processes. The technical form of the curriculum when founded within these perspectives tends to be more strongly developmental, stressing students' engagement with and experience of particular repertoires affiliated with subject areas and content. But 'skill' and 'content' narrowly defined are not taken as the central purpose of curriculum and instruction. It is generally affiliated with traditions of progressivism and constructivism, with a strong focus on developmental experience and the active construction of new knowledge. The model has been strongly criticised by advocates of the technocratic/accountability model as 'soft' on the specification and assessment of outcomes, and by classicists as failing to engage with cultural traditions, contents and canonical texts and knowledges. It has been critiqued by critical theorists as overemphasising individual development instead of social and cultural development.

The critical model, affiliated with critical theory and cultural studies in the humanities and social sciences strongly emphasises the need for competing, revisionist descriptions and models of the world and for "critical", active and agentive student engagement with knowledge. It has influenced Australian education and curriculum content. It has had little impact on the technical form of the curriculum, but directly addresses content issues and tends to stress "higher order" or "critical" skills. The model has been strongly criticised by technocratic advocates as failing to deliver demonstrable outcomes. It is

critiqued by the classicists as politically and ideologically "biased", and leading to a diluted or sceptical engagement with key traditions and works. It is critiqued by developmentalists as overemphasising social and cultural development at the expense of cognitive and psychological growth.

The traditional content model is based on a neoclassical model of curriculum from the work of Bloom, Hirsch and Ravitch, for example. That neoclassical model is based on the identification of canonical knowledges and texts in fields. Its technical form entails the enumeration and prescription of content knowledge, prescribed readings and topics. Until recently, it has been the dominant model in university teaching, and is strongly affiliated with traditional curriculum examination systems. The model is criticised by technocratic/accountability advocates as failing to provide demonstrable outcomes other than content reproduction. It has been critiqued by developmentalists as insensitive to individual and developmental diversity in background knowledge and approach to learning. It has been critiqued by critical theorists as hiding its "biases" and ignoring the dynamics of economic, cultural and social change.

The picture in terms of dominant curriculum models is complex. All have influences on different school subjects, mostly in blended forms. Different content claims about what should be taught and learned reflect particular paradigmatic positions on the curriculum. But each of these models offers different approaches to the taxonomic grids and descriptive categories for describing what should be taught and learned.

If we examine the technical form of current state curriculum, there was movement of most states to outcome based models after a commitment of state ministers to the Hobart Declaration (1990) and the Adelaide Declaration (1999). Although the actual contents and levels of delicacy and complexity have varied, the technical form of the curriculum marked out a defacto national curriculum settlement. As a result, 1-10 curriculum documents have tended to expand in length and duration, with detailed enumeration of 'outcomes'. Nationally the 11-12 senior syllabi tended to remain focused principally on skills and contents, reflecting focus on senior examination. In Queensland, despite the focus on school-based assessment, 1-10 syllabi follow the general outcomes format, though with inconsistent levels of other emphases and foci. The senior syllabi vary in depth and specificity but tend to share a content, topic, knowledge focus (see Appendix B).

Elements of all major curriculum models are evident in all states. But the technical form of the curriculum has moved towards a technocratic/accountability model via the focus on measurable and observable 'outcomes'.

Within this technical form, different subject areas have been shaped according to different curriculum models, contents and theoretical assumptions. For instance, preschool and early childhood curricula have taken a developmentalist philosophy; studies of society and environment have moved towards critical approaches; mathematics and science have moved towards process-based models. ***But these approaches sit within the technical form of the outcomes-based structure, and in the context of state consensus around the technocratic/accountability model. With the expansion of high stakes assessment, this risks shifting the locus of authority from teachers to a 'harder prescription' model (Klenowski, Appendix A).***

Technical form and the new economy

Queensland was the first state to define its goals and philosophy directly in relation to "knowledge economies" and the demands of changing technology, labour markets, cultural and economic globalisation (Education Queensland, 1999). Since that time, all states, and OECD ministries of education, have moved their systems' philosophies and policies to address economic, cultural and social change. These include still emergent foci on intercultural communications, new geopolitical conditions and relations, multiliteracies, digital and youth cultures – and varied curriculum responses to increased multiculturalism and multilingualism of the student cohorts (e.g., articles in Green & Luke, 2006; Kelly, Green & Luke, 2008). But the principal effect has been a call for curriculum that will ensure that 'new' skills and knowledges for the 'new' economies and technologies will be acquired (Cope & Kalantzis, 2007; Australian Council of Deans, 2002). This is a reframing of post war human capital theory: a focus on the production of skilled workers and, since 9/11, cultural cohesion. It marks both an extension of the 'generic skills' models introduced through vocational education in the 1990s (e.g., The Finn Report, Australian Education Council, 1991; and the Carmichael Report, Employment and Skills Formation Council, 1992), and a substantive shift in the perceived orientations of work in new economies (Gee, Hull, & Lankshear, 1996). There is a robust debate over the nature of these skills, over their relevance and applicability in specialist domains and across the population, and whether and how they

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can be 'integrated' into mainstream curriculum (e.g., Reid, 2005). There is an ongoing debate over what these new knowledge economy skills mean for questions of equity, and the stratification of outcomes is a matter we will address momentarily (OECD, 2005).

With the exception of Queensland's New Basics Trial, most states and territories have retained the outcomes-based technical form of the 1990s. These have been augmented by the new skill sets, which are referred to variously as: "essential", "cross-curricular", "generic", and "capabilities" (e.g., Reid, 2005). The impact of these debates has been for each state to adopt an overlay of "generic competences" to be mapped against the traditional Key Learning Areas in each syllabus. This has been a common approach internationally, most recently adopted by Ireland. ***Note here that the Ontario approach has been to embed the generic skills (e.g., higher order thinking) in the standards matrix that teachers use to report student performance in each subject.***

There is little or no empirical data on the actual uptake of generic skills. The Queensland Core Skills Test was based on an analysis of the literature and syllabus documents of the time in the 1980s and 1990s of cognitive operations and skills then seen as valuable in all educational and workplace settings. The New Basics Evaluation (ACER, 2004) further showed that innovative approaches to curriculum and pedagogy could yield improvement on key generic skills (multiliteracies, planning, collaborative work, cultural understandings, and intellectual depth) without basic skill test score decline. This was achieved through the embedding of the new skill sets in mandated curricular tasks. The most thoroughly researched and documented work on generic skills teaching, learning and acquisition is in the vocational education areas (for a review, see Billet, Fenwick, Sommerville, 2006). Further, state and the proposed national tests provide data on skill acquisition in traditional areas of literacy and numeracy. But work on the actual uptake of other generic skills in classrooms and the effects upon students longitudinal pathways and achievement patterns has yet to be undertaken (Luke, Weir, Land & Sanderson, 2007).

The 'generic skills for the new economy' argument has had an impact on the technical form of the curriculum. Specifically, most states list in their official curriculum these new skills for cross-curricular 'integration' or 'infusion' into teaching and learning. Yet their impacts on the enacted curriculum in specific subject areas have not been

substantiated or documented. Further, other than basic literacy and numeracy performance, they are not tied to high stakes assessment and accountability systems (Luke, Weir, Sanderson & Land, 2007). As a result, those 'assessable' generic skills tend to 'count' in student evaluation, while those skills affiliated with the new economy that cannot yet be assessed or evaluated (e.g., multiliteracies, intercultural communication, collaborative/group work) have been de-emphasised in work programs. The evidence on impacts, effects and efficacy of the 'generic skills' for the new economy movement in curriculum is as yet inconclusive.

Technical form and standardised testing

Comparative benchmarking of state testing data in literacy and numeracy at key junctures was established in the late 1990s following the Adelaide Declaration. This system has expanded its scope, by 2008 expanding to cover years 3, 5, 7 and 9. While individual states like Queensland have refined their testing instruments, and developed increased capacity for the use of test score data for systems diagnostic, developmental and policy purposes – the move to a wholly national testing system in 2008 raises a series of questions.

It is axiomatic in curriculum theory and in educational policy studies that the higher the stakes of the external testing system, the higher the "accountability pressure rating" (Nichols, Glass & Berliner, 2005). That is, in the technocratic accountability model, the relationship between curriculum, pedadgogy and assessment is realigned (Shannon, Appendix A). The higher the stakes in terms of the comparative aggregate and individual assessment of schools, teachers and students – with systemic incentives and disincentives – the more the system moves towards "hard prescription" (Welner & Oakes, 2007). The US No Child Left Behind legislation epitomises the model of hard prescription: with a systematic set of sanctions (e.g., public censure, replacement of staff, funding cutbacks, closure, outsourcing of students, issuing of vouchers) and incentives (e.g., public praise and rankings, merit pay) for schools meeting and not meeting test score targets. In high stakes systems, official formal assessment tends to mediate the enacted curriculum; teachers will prepare students for the tests, narrowing the scope of the curriculum (Nichols & Berliner, 2007). Further, as Klenowski , Shannon and Schleicher (Appendix A) maintain, an over reliance on testing to 'enforce' prescription of the curriculum can have the collateral effect of constraining teacher

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professional capacity and judgement (Darling-Hammond & Bransford, 2005). This may limit rather than enable the school level reform of pedagogy (Newmann et al. 1996; Fullan, 2008) and serious questions have been raised about the sustainability of any test score gains achieved through heightened accountability pressure ratings (Nichols, Glass & Berliner, 2006). ***It is notable that Finland has no mandated standardised testing (Sahlberg, 2007). Ontario relies upon a mix of sample and census testing, with data supplied to schools and school boards for developmental, comparative and diagnostic purposes (Levin, Appendix A).***

What is crucial, then, is that the domains and constructs of the assessment instruments stand in a principled alignment with the curriculum (Klenowski, Levin, Appendix A). Most state testing systems have attempted this task of alignment. However, the problems arise regarding those valued "outcomes" or "contents" of the curriculum that are officially valued in the syllabus but are beyond the scientific description and measurement of psychometrics and available large-scale assessment instrumentation (see Moss, Girard & Haniford, 2006; Klenowski, Appendix A).

No matter how technically excellent, tests and examinations will tend to narrow or make a defacto selection from curriculum into what is describable within their testing format and technical parameters. Calling for assessment reform and innovation, Eva Baker, Director of the UCLA Crest Centre on Research on Educational and Student Testing, makes this point in her 2006 AERA Presidential Address (reprinted as Baker, 2007). There is an extensive international literature on the limits of conventional testing and examinations in assessing and describing student achievement in a broad range of domains – from traditional judgements (e.g., artistic taste), developmental claims (e.g., creativity), new workplace competencies (e.g., collaborative work), social outcomes (e.g., character, values), new digital competencies (e.g., online communication, gaming) (e.g., Rochex, 2007; Baker, 2007). The crucial issues of adolescent identity raised by Alvermann and Marshall (Appendix A) – central to the Middle Phase of schooling - also stand outside the ambit of conventional assessment. Furthermore, there is ongoing debate over how best to assess and capture a range of cognitive phenomenon: higher order thinking, critical thinking and analysis, and competence with new digital multiliteracies.

The expansion of national testing and increasing accountability stakes around test and examination results have the potential effect of narrowing the curriculum, of increasing the teaching and learning of that which is assessable to assessment using conventional techniques. It fits well with the "outcomes-based" technical form, featuring a conceptual reductionism of learning and knowledge to assessable skill. Standardised testing can be an important part of informed prescription. It can help raise teacher and school expectations of children of identifiable equity groups (Schleicher, Appendix A) and it can assist in developmental diagnostic decisions by teachers (Klenowski, Appendix A). But if the testing and examination system becomes too 'high stakes' and too exhaustive, the system risks the tests: (1) becoming the defacto curriculum, with teachers and schools ignoring or eliminating that which isn't tested; (2) deterring "informed professionalism" in local curriculum and assessment practice, and therefore the achievement of improved quality and equity; (3) constraining the development and teaching of 'new capabilities' that are emerging in civic, community and workplace life. As Klenowski (Appendix A) argues, there is an urgent need for implementation of non-test based assessment approaches and instruments at the system, school and classroom level. In part, this is needed to balance the potential 'curriculum narrowing' effects of the expanded range and coverage of national testing. It also follows on from the recognition of the centrality of classroom-based, teacher-based assessment in improving and broadening the achievement of students from diverse learning backgrounds and histories (Klenowski, Appendix A).

Technical form and teacher professionalism

The public debate over the past two years has been focused on issues of curriculum content, and issues of teacher quality. ANU economist Andrew Leigh (2005) claimed that comparative historical data indicated that the overall quality of teachers, as represented in their prior achievement levels, had declined. Currently, and in the early 1990s, there has been public criticism of admission of teacher education students with lower senior matriculation scores. This debate reinforces claims that problems with curriculum and overall achievement were attributable to lack of teacher quality. At the same time, university Deans in a range of fields have claimed that teachers' knowledge and training in the sciences, maths and literacy was inadequate. In response, Deans of Education have called for curriculum reform for new economic and cultural conditions

(Australian Council of Deans, 2002). They also have argued that further innovation and reform in teacher education has been stalled because of inadequate university funding. The Standing Committee on the Quality of Education (2007) concluded that teacher education reform was needed. Consequently, the Committee supported improved funding for pre-service teacher education programs, calling for innovation and reform in teacher preparation.

In response, teachers unions have argued for increased pay, expanded professional development funding, smaller class sizes, and teacher-based approaches to reform and the recognition of merit. It is worth noting that Australian teacher unions have supported and endorsed curriculum reform in some subject areas but have opposed the expansion of standardised testing and the escalation of the 'stakes' of testing, specifically the unadjusted publication of comparative school test score results.

The response of the previous federal government to these issues was to call for merit pay structures, support for federally supported professional development in key areas, and increased accountability pressure through testing and public comparisons of school results. While it has announced a commitment to a national curriculum, a national testing system, and the publication of school results - the current federal government has yet to table specific policy in these areas.

As noted across this report, there is a clear consensus in the school reform and improvement literature, and in curriculum development and implementation research that teacher quality counts. But exactly what elements of teacher knowledge are required to improve quality and equity is the object of theoretical debate – and a paucity of empirical data. The questions around teacher knowledge, capability and professional expertise are the subject of extensive Australian and international research (Cochran-Smith & Demers, 2008; Darling-Hammond & Bransford, 2005; Day & Sachs, 2005). In benchmark work on teacher knowledge and thinking, Shulman and colleagues described different kinds of teacher knowledge in the following categories: knowledge of learners, knowledge of educational contexts, knowledge of educational aims and purposes, content knowledge, pedagogical content knowledge, and curriculum knowledge (see Deng, Appendix A). Shulman's (1986, 1987) work recognised the centrality of teacher overall knowledge of disciplinary knowledge (e.g., maths, art, literature, sciences, history), but it argued that this is necessary but not sufficient for effective teaching and

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learning. He maintained that knowledge of the school subject (e.g., the official curriculum), knowledge of learners, and pedagogical strategies relevant to content and subject were also significant components of teacher professionalism. There have been various bids to define requisite and "threshold" knowledges (Darling-Hammond, 2003) in all of these areas, and modifications of Shulman's original categories.

The teacher education and socialisation literature features three decades of robust qualitative and quantitative studies that show that the development of teacher competence is a continuous process (e.g. Zeichner & Liston, 1990). Preservice training is but an initial starting gate (Feinman-Nemser, 2001). Teacher knowledge and expertise in all of Shulman's categories is acquired, reframed, used, augmented, updated and modified across teaching careers, with concentrated longitudinal development occurring during preservice training and the first three to five years of teaching (e.g. Zeichner & Gore, 1990; Zeichner, 2007; Martinez, 1998). Teachers develop their knowledge and expertise through various sources: including general school and staffroom culture, peer learning and formal mentoring, further research and study, and professional development (Cochran-Smith & Demers, 2008). In this recent article, Cochran-Smith and Demers (2008) propose a model of ongoing teacher education and professional development "as a bridge" between teacher and curriculum.

While the literature on the effects of merit pay for teachers is mixed, the preferred strategy in the US and UK has been two-pronged. First, it has entailed the development of teacher standards and statutory bodies to regulate teacher education programs (for a review, see Mayer, 2005; Little, 2003, Little, Horn & Bartlett, 2000). This includes a range of strategies: setting standards for program accreditation, and, in an unregulated US university market, exit testing of teacher education graduates using standardised instruments. The development of teacher standards and accreditation of programs is in place in several Australian states and spreading to others.

In a very different approach to issues of teacher quality - the US and UK have mandated scripted instructional approaches (Shannon, Appendix A). In the UK national literacy program and US Reading First legislation, teachers are trained or 'accredited' by textbook publisher trainers to teach mandated curriculum packages. These explicitly prescribe the pace, content and approach to teaching. Adherence is monitored via administrative observation at the school level and regular standardised testing. This has

spurred the development of a multi-billion dollar textbook commodity industry (Larson, 2001), which has recently been the subject of intense legislative scrutiny in the US debates over the renewal of NCLB.

The approach is not new, dating back to the first scientific reading series developed in 1913 in the United States. These evolved into "teacher proof" curricula, materials for teaching that could be taught by any teacher with variable levels of training (Shannon, 1988; Allington & McGill-Franzen, 2000). Patrick Shannon's article (Appendix A) details the mixed results of this approach.

The principle of scripted pedagogy is for the curriculum materials to standardise and, therefore, quality control classroom-based curriculum, instructional approach and assessment. This shifts the "locus of authority" (Shannon, Appendix A) for everyday instructional decisions, selection and use of curriculum materials away from teacher professionalism towards the package. "Reproductive expertise" is the ability to deploy a scripted pedagogy with some degree of efficiency and effectiveness (Darling-Hammond & Bransford, 2005). "Adaptive" professionalism refers to the ability to interpret syllabi, engage with diverse learners and school contexts, and to make relevant and effective decisions about how to modify, alter and adapt the curriculum in relation to evidence on learner background, ability, pace and approach to learning. This, they argue, is essential for addressing the needs of equity and at risk groups, and for improving the overall quality of education. Hargreaves (2003) argues that this marks a shift in teachers' work from an industrial, Fordist production model to a 'new economy' focus on teaching as a contextual, adaptive and problem-solving activity. He goes on to argue that it is contradictory to have schools aiming for the production of 'knowledge-economy workers', while at the same time setting conditions where teachers are not building and using new professional knowledge (cf. Schleicher, Appendix A).

> *No amount of change in curriculum or policy will compensate for school environments that students, especially those with the greatest challenges, find alienating and unsupportive.*
>
> **Levin, Appendix A**

Prominent "high quality/high equity" systems have made pre and inservice teacher training, professionalism and local curriculum capacity high priorities. The cultural

contexts of many prominent systems, Korea, Ireland, Finland and Canada 'value' teachers and teaching as a profession (cf. Alexander, 2001). The US-based literature on school reform has provided case-based evidence that effective teachers of minority and lower socio-economic students have high levels of professionalism and the capacity to adapt curriculum to specific cohorts of students' cultural background knowledge and cognitive strategies (Newmann & Associates, 1996; Ladson-Billings, 1997).

Debates around teacher quality have impacted on the technical form of the curriculum, leading to increases in the level of technical specification for syllabus content. In the case of the Queensland curriculum, for an expansion of syllabus content and foundational explanation in an attempt to 'compensate' for perceived lack of workforce expertise in specific fields. High quality/high equity systems have taken a different strategy: with tighter syllabi, rich professional development resources, stronger alignment of syllabi with preservice teacher education, and structural incentives for ongoing professional development and teacher development. High quality/high equity systems value and support adaptive teacher professionalism.

THE GOAL: HIGH QUALITY, HIGH EQUITY SYSTEMS

For the past five decades, western democratic education systems have attempted to strike a balance between the goals of economic development and competitiveness, on the one hand, and social and cultural development and cohesion, on the other. The stated philosophy of the Queensland system focuses on the quality provision of educational skills, knowledge and competence in ways that enhance Queensland's economic development and social cohesion in the context of rapid, global, national and regional change (Education Queensland, 1999). This aligns Queensland's goal with what the OECD has called "high quality" and "high equity" outcomes.

In a major statement on the nature of "liberal education", Philosopher Amy Gutmann (1986), now President of the University of Pennsylvania, argues that the purpose of democratic education is for all students to reach a "democratic threshold" of knowledges, skills and dispositions for gainful and productive participation in democratic social institutions and economies.

How do we translate this into curriculum terms? In a benchmark discussion of social justice, philosopher Nancy Fraser (1997) distinguishes between "recognitive" justice

and "redistributive" justice. In curriculum terms, we can index the former concept to notions of "recognition" and the general move towards including, and thereby recognising those cultures and histories, knowledges and skills that previously have been marginal in mainstream curriculum (Gale & Densmore, 2000). This is a matter of recognising the different cultural backgrounds, linguistic competences, histories and approaches to learning of women, Aborigines and Torres Strait Islanders, immigrants, and those sub-communities of learners with special needs and interests. To date, issues of recognitive justice arise in cultural debates over curriculum content.

Redistributive justice, following Fraser, entails the equitable and fair distribution of material wealth, access to services, opportunities to participate in civic and economic life, and so forth (Gale & Densmore, 2000). Education stands as a democratic entitlement. In educational terms, the OECD's concern with "high equity" systems aligns with redistributive justice: the more equitable achievement of conventionally-defined achievement outcomes, retention and participation rates, and credentialing.

The OECD approach has been to argue for a new version of the human capital model, that stresses both relevant skills for the new economies and the development of social and cultural capital (McGaw, 2006). In the technical analysis of PISA data, the OECD has developed a terminology to describe the relative efficacy of systems. The tables of comparative national performance in literacy, maths and science provides evidence of relative 'quality' of systems at producing conventionally measured test achievement. The OECD (2005) describes equity both in terms of (1) the spread of achievement across a population (e.g., through standard deviations), (2) the relative performance of identifiable equity groups (e.g., migrants/second language learners), and the (3) relative impact of socio-economic background on test performance (through regression analysis). Schleicher (Appendix A) describes the 2007 report data, noting the variable elements of systems policy, governance and funding that correlate with quality and equity performance.

Many systems achieve high average means in performance, but also have steep equity slopes, indicating that socio-economic background remains a strong predictor of performance (e.g., most developing countries, but notably, the US, UK and Germany). Other systems generate both high average means in performance but also flatter equity slopes, indicating that background has less of an impact on determining performance

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(e.g., Finland, Sweden, Canada, Ireland, Korea). Australia and New Zealand currently are placed on the cusp between the groups, with Schleicher (2007) placing Australia in the high quality/high equity category. In Appendix A he notes that the impacts of socio-economic background on achievement tend to correlate strongly with between school variance in the Australian context.

The OECD data shows that quality and equity do not necessarily have to be traded off against each other. The achievement of "redistributive justice" is not incompatible with the system producing high quality, relevant and powerful resources for the new economy.

Schleicher describes the conditions that characterise high quality, high equity systems as a balance of accountability and professionalism. Specifically, he describes accountability as having central curriculum and evaluation system that enables the steering of teachers' and schools' work towards educational outcomes. He calls this "informed prescription". In terms of professionalism, he refers to schools' and teachers' relative degrees of autonomy in using professional judgement to shape and modify curriculum and pedagogy. This he calls "informed professionalism".

An over emphasis on high stakes accountability without a comparable investment in school autonomy and teacher professional capacity may lead to a form of prescription that generates "uniformed professionalism". This has been the result, according to Shannon (Appendix A) and numerous others studying the US NCLB reforms, which generally has taken the form of more explicitly scripted and directive pedagogy. In effect there is a bid in the United States to norm and standardise classroom pedagogy and the enacted curriculum in primary schools (Abedi, 2002; Stevens, 2006). Yet there are extensive studies that the effects of such approaches are mixed, leading, variously to test score plateau effects, teacher deskilling, and uneven outcomes patterns. In a major study of National Assessment of Educational Progress (NAEP) longitudinal test results, Nichols, Glass and Berliner (2005) claim that increased accountability through testing and prescriptive curricula in fact has deterred closing the "equity gap" in the US. The Harvard Civil Rights Project undertook a similar study, reanalysing state test score reports in relation to NAEP data. In that study, Lee (2006) reported that there had been no consistent or sustainable closure in the equity gap which, in some cases, had widened and, notably, in the states with the longest running high-stakes testing and

accountability system, had had little sustained effects in terms of test score gains or improved minority achievement. In a reanalysis of current NAEP data, former US Assistant Secretary of Education Mike Smith (2007) reached similar findings.

School efficacy and systems results entail complex alignments of not just the variable factors studied in PISA, but also of historical, cultural and social trends, patterns and forces. Hence, direct comparison or adaptation of one national approach to another, are never easy. Because of the complexity of policy and curriculum – each comparative case needs to be considered in terms of its overall systems policies and cultural and historical context (Alexander, 2001).

In the case of Finland, syllabi feature brief descriptions of knowledge, skill and understanding, and educational processes and experiences to be taught and learned (Luke et al. 2006). Note here that the listing of syllabus goals mixes "skill" and "behaviour" statements, with more traditional knowledge statements, with statements of necessary educational experiences or processes. Finnish syllabus documents are brief and written in non-technical language. Teacher education programs are aligned to cover syllabus contents. This is possible, in part, because of the relative brevity of the syllabus. Testing programs are available for schools to use; but there is no mandated high stakes testing. The syllabus is translated by teachers at municipal level annual curriculum planning. Finland relies upon highly qualified teaching workforce (Sahlberg, 2007), generally from the top 10% of school leavers, with a Masters degree with an applied educational research focus as baseline for entry into the profession from universities that have longstanding dedicated teacher education programs. This sits within a broader secular and non-secular culture that holds teachers, education and literacy in high regard (Simola, 2005).

Ontario syllabi list "specific expectations" for each practical domain in a school subject. Like the Finnish curriculum, these are not stated in a uniform language of "outcomes" or "knowledge", but blend skill and behaviour, competence, knowledge and processes. Each is accompanied by a "teacher prompt", which consists commonsense heuristics that unpack the curriculum. The Ontario equivalent to 'generic competences' are built into a grid of standards of performance for each subject. A notional or "aspirational" target is set for all learners to achieve. In Ontario, a range of supports set the conditions for informed professionalism. Teacher education programs are oversubscribed, drawing

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top quality school leavers and postgraduates; there are increment and promotion incentives for ongoing degree completion. A range of professional development and teaching resources are available from the Ministry, local school boards, professional associations and unions, and universities (Connelly & Connelly, Appendix A). This includes augmenting materials and approaches for specific equity groups (e.g., Indigenous, second language speakers, and migrant students). The interpretation of syllabus documents into local curriculum units and plans is undertaken at the district, school and classroom level by teachers and district support advisory staff. Teachers may use a range of materials, guided by a list of possible texts and materials authorised by the province through a vetting process by an independent curriculum authority that checks publishers' materials against the curriculum. Testing is done at similar junctures to Queensland, and results reported to schools, enabling systemic and school level analysis of performance comparison. However the testing up until the year 10 literacy test is not high stakes in terms of individual student, school or teacher performance. Testing is used to guide school board and school level curriculum planning – and the data management system enables principals to identify and compare their performance against schools according to a number of demographic and locational variables.

In these high quality/high equity systems,

- The technical form of the syllabus is relatively low definition: that is, it outlines 'expected' coverage and standards without attempting to 'script' or 'control' pedagogy;

- The 'prescription' is enforced not through high stakes testing, but rather through parsimonious testing that enables schools to diagnostically assess their performance relative to comparable schools, through strong systems messages about standards and equity, and through the official provision of a range of professional development resources from various sources and at multiple levels of the system;

- The expectation is that teachers will exercise informed and autonomous professionalism, which is supported at multiple levels through aligned preservice training, professional resources, inservice training, and annual regional/district/municipal or school curriculum planning.

TRANSLATING THIS PHILOSOPHY INTO THE PHASES OF LEARNING

A broad consensus has emerged in Australia on the conceptualisation of schooling into three distinct phases: early, middle and senior. The concept of a learning phase is developmental: that is, it assumes shared developmental characteristics of cohorts distinguished by longitudinal developmental stages. In this way, the adoption of phases (rather than school subjects per se) marks a partial adoption of the "Developmentalist/Process" curriculum model described above.

Alvermann and Marshall (Appendix A) review the case for a distinctive 'adolescent' or middle phase of learning. They argue strongly that the new worlds of youth culture are changing the nature of adolescence, raising ongoing curriculum questions about identity and culture, student background knowledge and cognitive resources, relevance and connectedness to the world. Their position is that engagement can be built through a focus on common and diverse cultural conversations and exchanges around issues of identity, significant texts drawn from various cultural traditions, curriculum materials based on texts of everyday life and new technologies. The ACT, Victoria and other states have successfully adopted middle years approaches to schooling (Luke, Elkins et al. 2003); with the ACT PISA results in adolescent literacy indicating comparable performance levels to Finland and Canada. Yet there are competing theoretical and empirical claims about specific age and stage-specific competency. Hence, the determinate 'cut-off' point between stages is somewhat arbitrary. Most phase and age specific models broadly assume different developmental rates of progress, overlap and individual difference in progress within stages. This is exemplified in the approaches to preschool and early primary education currently adopted in Queensland syllabi.

Major Australian studies have looked at the rationale, current provisions, curriculum and policies for the early years of schooling (e.g., Parker-Rees and Willan, 2006), for the middle years (e.g., Luke, Elkins, Weir et al. 2003) and for the senior years (e.g., Lamb, Walstab, Teese, Vickers, & Rumberger, 2004; Teese, 2000). It is not our intention to cover these grounds again or to make the case for curriculum policies built around and through distinctive stages. Our concerns are (1) whether and how there should be different categories, taxonomies and frameworks for accommodating the phases; (2) whether and how school subjects should be organised around phases; and

(3) how each of these phases can have a thematic or philosophic coherence that reflects the overall system commitment to the goals of high quality and high equity.

> *The results from PISA suggest that both overall variation in student performance and performance differences between schools tend to be greater in those countries with rigid institutionalised selection and tracking practices at early ages. By contrast, virtually all countries that performed well in PISA place an emphasis on strategies and approaches for teaching heterogeneous groups of learners within integrated education systems, with a high degree of individualised learning processes and strong student-teacher relations.*
>
> **Schleicher, Appendix A**

First, the Ontario and Finnish syllabi provide a key to the technical form of the syllabus. By opening the statements of learning to a range of types of descriptors, syllabi are able to blend, mix and match expectation statements about content coverage, with statements of observable skills and behaviours, with statements about broader attitudinal and dispositional development, with statements of essential educational experiences and processes. In this way, as noted above, these systems can accommodate different models and approaches to curriculum content. This would enable, for example, a stronger emphasis on developmental process, educational experience and skill acquisition in the early years. It would enable, for example, a later emphasis on tasks and participation, on cultural identity and connectedness to the world, or a more traditional emphasis on what Alvermann and Marshal (Appendix A) here refer to as the "domain knowledge" required for comprehension. We will return to this important point *about phase-specific syllabus flexibility* later, when we discuss the variability in content and structure of 'school subjects'. Our point here is that what we have termed the low definition syllabus does not adopt a uniform approach across phases or subjects to the description of teaching/learning contents.

A lower definition syllabus that does not dictate instructional approach and allows diverse descriptions of expected learnings as proposed would allow for phase-specific approaches to instruction and assessment – as is called for by advocates of early, middle and senior year phases.

Second, the phase model of schooling assumes developmental diversity and overlap. That is, all models of educational development – from classical Piagetian phase models, to models of cognitive and linguistic growth, to models of social and cultural practice – are based on a common assumption. Early childhood development and adolescent development do not follow strict age/grade patterns, varying by gender, cultural and individual difference (Alvermann & Marshall, Appendix A; Egan, 2002). Individual learners, and cohorts of learners with shared cultural and linguistic resources, or with special needs optimally progress at different rates through elements of the curriculum, with patterns of progress and periodic regress.

This requires an approach to teaching that (1) focuses on distinctive phase-specific approaches to learning (e.g., tasks and projects in adolescent schooling); and (2) enables teachers to modify and adopt curriculum and syllabus to accommodate different levels of growth, prior knowledge, approaches to learning and overall individual psychological and social development.

These considerations of a phase model sit in contradiction to school subjects partitioned by age/grade (e.g., year 2 versus year 3 English), which run the risk of enforcing arbitrary developmental thresholds, expectations and 'cut-points'. We therefore make the case for phase-specific school subject syllabi. This would mean that there would be a unified phase syllabus in each school subject (e.g., p-3 English; middle years science; senior mathematics).

> *All secondary school reform must expressly commit to the achievement of high standards for all students in a range of activities all of which can be shown to lead to positive outcomes. Further there will be some basic areas in which all students must be competent, primarily in regard to written and oral communication as well as broader skills of teamwork and problem-solving*
>
> **Levin, Appendix A**

The case for a distinctive "senior" phase of schooling (years 10-12) is somewhat different. To an extent similar developmental considerations apply to young adults. However, the case for a distinctive, unified senior phase is based on the need for distinctive pathways through schooling to work, further education, civic and cultural life (Levin, Appendix A). In a review for QSA, Conley (2005) makes the case that the

current system is strongly geared for tertiary entry (Appendix B). Education 2010 and the ETRF reforms are based in part on the research on longitudinal pathways of youth from school (e.g., Lamb 1996; Teese, 2000; Vickers & Lamb, 2002). Vickers and Lamb (2002) reanalyse state data to argue that the stronger the reliance on high stakes examination and matriculation to act as a 'gatekeeper' to senior schooling, the higher the wastage rate of senior students. Lee's (2005) analysis of US NAEP and achievement data argues that increases in high stakes testing and accountability pressures lead to decreased senior retention and increased drop out rates.

Pathways are only justifiable if they lead to real opportunities for meaningful and directly-paid employment, or to broadly accepted labour market qualifications, or to tertiary study, or even better – to more than one of these. This principle should suggest that movement across pathways should be supported, and a strong focus in curriculum and outcomes on generic skills that apply across pathways. This reinforces similarities rather than stressing differences in content.

Levin, Appendix A

Following the Ontario model described by Levin (Appendix A), we make the case for a multiple pathways system at the senior level of schooling (Pitman & Herschell, 2002). South Australia also has adopted such a system. In the Ontario system, there is clear counselling and information on how specific subject combinations can be realised in different pathways to further education and work. The aim is to optimise both clear developmental articulation between years 10-12 in specific school subjects while maintaining flexibility in selecting and moving between pathways. In Ontario, senior subjects can be taken from different sources, and blended into pathways that aspire to 'parity of esteem'. This was a key theme in the proposals for Queensland developed by Pittman and Herschell (2002).

There is a strong case for a unified senior phase of schooling from years 10-12. It would have clear developmental articulations in subject syllabi across the three years. It would link specific subject choices to distinctive pathways. At the same time, it would offer flexibility to move between pathways, for reentry, and for students to progress at different developmental and chronological paces through the pathways. While the ETRF was based on similar principles, it has not led to a fully realised reorganisation of subjects out of the traditional single year, single autonomous school subject boxes.

Third, while each of these phases typically offers a particular paradigm of learning (Alvermann & Marshall, Appendix A), these have not been brought together in alignment with the overall systems goals of high quality and high equity. The assumption has been that 'developmental appropriateness' will enhance growth, learning and, thereby, improve student outcomes more generally. So while there is general reference in the literature and curriculum to principles of "early years" or "middle years" – a fuller philosophy that articulates with the quality/equity goals of the system is useful in guiding the implementation of phases in educationally meaningful and valuable ways.

The paradigm affiliated with Australian and international early years teaching and learning could be characterised as a blend of cognitive developmental and play/social interactional models (Barratt-Pugh & Rohl, 2000). The model attempts to address the variable individual cognitive, social and behavioural developmental patterns and issues in early childhood. The paradigm affiliated with Middle Years education in Australia and internationally can be characterised as focused on engagement and relevance (Luke et al. 2003), with a strong focus on identity and youth culture (Alvermann & Marshall, Appendix A). The model attempts to address the specific motivational, social and cultural issues facing adolescents described by Alvermann and Marshall in Appendix A. The curriculum paradigm affiliated with the Senior Years in Australia and internationally has tended to focus more on course content, in part an extension across the Commonwealth of the British A Level tradition. The current version of the model attempts to address the requirements for tertiary study and for vocational training (Teese, 2005; see also our discussion of Conley in Appendix B).

We propose that each phase be set in relation to specific distinctive goals that are based of high quality/high equity. The aim would be to re-envision Year 12 as a "threshold" for participation in democratic society (Luke, Graham, Weir, Sanderson & Voncina, 2006). We propose the following themes for each phase:

* **Early Phase: Equity of Access** – a focus on access to a shared toolkit for learning, cultural participation and ongoing education. The developmental focus on access would accommodate current early childhood philosophies that recognise the diverse cultural and experiential, cognitive and social resources that children bring to formal education. It would stress acquisition of proficiency in early literacy and numeracy, but it would

accommodate individual difference and diversity. It would strive to provide children from very different pathways shared and enabling access to knowledge, education and engagement.

* Middle Phase: Equity of Engagement – a focus on engagement with a corpus of culturally significant meanings, practices and knowledges, a joining of a common cultural and intercultural 'conversation'. The developmental focus on engagement would address issues around motivation, identity, youth and community cultures, participation and resistance to schooling raised in the middle years literature (Alvermann & Marshall, Appendix A; Luke, et al. 2003). It would stress engagement in culturally and scientifically significant knowledge, attempting to provide students with a relevant broad-based liberal arts and sciences education. Following a middle years philosophy, this liberal arts and science orientation could include at different levels and school subjects a variable focus on process/developmental work and, where relevant and important, a more traditional content domain knowledge focus.

* Senior Years: Equity of Pathways – a focus on multiple pathways to work, civic and cultural life, with the goal of all students meeting a democratic threshold for gainful and active participation in society. The developmental focus on pathways would address issues of the different aspirations, orientations and capacities of students. It would stress clear developmental articulation of knowledge and capacity within specific school subjects across a three year span and it would enable variable combinations of these subjects into recognised fields of productive social and economic participation. Following a senior phase philosophy, this could enable the retention of traditional content foci, developmental/process approaches in others, and practical/applied orientations in others.

ESTABLISHING AND USING STANDARDS

According to the Oxford Education Dictionary, 'standards' refers to allegiance to authority, customs and standardized measures of value (Ericsson, 2005). Seeking increased accountability, Australian systems have moved toward standards as a "lever to improve the reliability and consistency of teacher judgement…" (Klenowski, Appendix A).

Yet the term has remained undefined. Klenowski discusses the elusive characteristic of the concept. She argues the term can be used for moral or ethical imperatives (i.e. should do), legal or regulatory requirements (i.e. must do), learning milestones, quality benchmarks (i.e. expected), and arbiters of performance quality (i.e. defining success or merit). While most systems have statements of standards – they tend to run different definitions and functions together with a lack of clarity. This had led to a narrowing of the debate around standards, with a focus on standards as arbiters of performance quality (Ericsson, 2005).

In current contexts of increased accountability, educational standards are most commonly used as benchmarks and/or arbiters of performance, and thus they purport to function to:

- Provide a common frame of reference and a shared language for communicating student achievement;

- Promote teachers' professional learning, focused on good assessment practices and judgement of the quality of student achievement against system level benchmarks; and to

- Present more meaningful reports and engagement with assessment as a learning process.

(Klenowski, Appendix A)

In an accountability context standards are used as a lever to improve the reliability and consistency of teacher judgement and classroom evidence is used by education systems for reporting and tracking achievement over time.

It is teachers' judgements and interpretations of assessment data in the context of social moderation that is key. For it s teachers who have direct access to the information needed for an accountability system.

Klenowski, Appendix A

As descriptors of student achievement standards are used to monitor growth in student learning and provide information about the quality of student achievement. It is important, however, to emphasise that there exists no simple yardstick for measuring for student or school achievement. Examination or assessment standards cannot be

objective in the same sense in which standards relating to physical measurements are objective. In large scale state and national systems, teachers report student performance according to both 'grades' and, as in Queensland, against specific syllabi knowledge and skill domains. The latter tends to be descriptive. It is worth noting that most systems recognise the inherent technical limitations with reliability and generalisability in the school and classroom assignment of grades (e.g., 1-5, A-E). As Klenowski (Appendix A) points out, a key principle of the assessment-for-learning paradigm is that a common vocabulary can provide grounds for school-based moderation and professional exchange around standards.

> *What is the evidence that the assessments employed reliably measure what is most important in the standards in ways that reflect the complexity of the learning goals specified in the standards?*
>
> **Alvermann & Marshall, Appendix**

This raises serious questions about the format and content of standards. The current iterations of the QSA standards are attempts at benchmarks of student achievement (Queensland Studies Authority 2006). The Essential Learnings can be considered content standards because they identify what should be taught and what is important for students to know and be able to do. QCAR Standards are performance benchmarks that provide a common frame of reference for making judgements about the quality and progress of student achievement (p.2). According to the QSA (2006), the Standards are the interpretation methods for drawing inferences from the performance evidence (p. 11).

They are designed to support learning, and have been developed to facilitate the use of assessment strategies to promote the achievement of the Essential Learnings. The Standards framework aims to assist in providing effective feedback, to be aspirational in terms of modelling desired performance levels. It has the potential to be an illustrative progress map and can provide a valuable toolbox for students to gauge their own learning progress and identify the next steps in learning (p. 13).

As Levin (Appendix A) argues, the imperative in Ontario has been to simplify standards to make them accessible to parents and stakeholders, while at the same time ensuring that they are useful for teachers and students in everyday classroom work and

curriculum planning. The Ontario standards are versions of cross-curricular essential learnings. The use of 'generic capacities' in standards statements at all levels and in all subjects are an attempt to solve the problem we identified previously: that the 'new economies' competences are ignored by schools and teachers, who continue to stress conventional school subject outcomes and knowledges and adamantly resist attempts at cross-curricular 'infusion' and 'integration' where they are not affiliated with school subjects or conventional assessment.

The approach has enabled the Ontario system to use standards to develop a common nomenclature across school subjects and phases. They are used to set notional and "aspirational" standards for student achievement (e.g., 75% of all students will reach standard 3)– and to provide a vocabulary at the system, school and classroom level for discussing performance and achievement. While reporting is not 'reliable' in technical, psychometric terms – it is moving the system, teachers and parents towards common understandings around student performance.

> *Intelligent accountability policies, such as those of Finland, (Sahlberg, 2007) involve trust-based professionalism which grows over time from an ethos of respect within the education system that values teachers' and principals' professionalism in judging what is best for students and in reporting their achievements.*
>
> **Klenowski, Appendix A**

A further key issue around standards concerns the delivery system's accountability: The capacity of the system to provide requisite and optimal teaching and learning conditions is central to curriculum delivery. So currently the focus on content and performance standards alone places the "burden of proof" (and we would say access) "on teachers and students almost exclusively" (Ericcson, 2005, p. 239).

We recommend the establishment of baseline *"delivery standards"* within the complete syllabus design process. Content and performance standards without delivery standards are necessary but not sufficient and perhaps indeed impossible to attain. Delivery standards define the availability of programs, staff, and other resources that schools, districts, and states and systems should be accountable to provide so that students are able to meet content and performance standards (Ravitch, 1996). They are criteria for, and the basis of, assessing the sufficiency or quality of the resources, practices, and

conditions necessary to provide all students with an opportunity to learn. In other words they explain what systemic support – in terms of fiscal, human, material and curricular resources - is required to provide a high-quality, high equity education system.

> *What is the evidence that teachers have had the resources, the skills, and the opportunities to teach the standards across a wide range of socioeconomic and cultural contexts to a wide range of students?*
>
> Alvermann & Marshall, Appendix A

The balance of informed prescription and informed professionalism relies not simply on the strength of central mandate: it relies upon a total system commitment to the realisation of informed professionalism. The compelling evidence we have reviewed here suggests that simple 'hard prescription', with incentives and disincentives will not in and of itself yield improved quality or equity. Rather, the setting of learning expectations and standards needs to occur in the context where the system's resources converge on teacher professional capacity at curriculum, instruction and evaluation.

> *Some of the best performing countries in PISA therefore build their success on combining clear and ambitious standards for educational performance with access to best practice and professional development and support for schools.*
>
> **Schleicher, Appendix A**

To conclude this report, we now restate the model and then describe the "delivery standards" and systemic policy conditions that would have to be in place for the syllabus design to be successful.

THE PROPOSED MODEL RESTATED

In this section we restate the proposed syllabus design and link to the principles developed throughout the report.

SYLLABUS LENGTH AND ACCESSIBILITY: Each syllabus would be as short as possible, the length determined by the task of 'mapping' the subject. It would be written in teacher-accessible professional language. They would therefore follow a principle of

what we have termed 'low definition' curriculum. Each syllabus would refer teachers to adjunct online resources on materials selection, unit and lesson planning, classroom and school-based assessment, pedagogical strategies and the specific needs for identifiable student cohorts including indigenous students, students with special needs, migrant, rural and socioeconomically marginalised students. Rather than 'jam-packing' the syllabus with foundational understandings, resources, sample lessons and units, classroom assessment guidelines and special considerations for learners – the relegation of these materials to authorised and fully-vetted, teacher-accessible professional resource

SYLLABUS COVERAGE: Each syllabus should cover a designated school subject in its specific phase. For example, there would be a specific syllabus for English for each phase, for Mathematics for each phase and so forth. In the senior phase, subjects that spanned the three years (years 10-12) would have a single syllabus wherever possible and practical. This would enhance the co-curricular planning between grades; explicitly address questions of primary/secondary transition; and provide teachers with a synoptic view of developmental scope and sequence that is not strictly age/grade hierarchical. Furthermore, it would enable teachers to adopt the curriculum to accommodate a broader range of developmental capacities and backgrounds.

SYLLABUS CONTENT: Each syllabus would aim to identify domains of a subject (e.g., writing, reading) and identify for each domain specific expected learnings. The aim would be to keep these statements of learnings as brief, accessible and minimal in number as possible. These would be deemed as essential for all students – not 'minima' but a 'map' of what is to be learned in the field. These could be described in principled blends of various categories: ranging from traditional content statements, skills and behaviours, tasks and performances, or processes and experiences. This would enable a flexibility to accommodate different school subject philosophies, different phase requirements, and different curriculum models.

SYLLABUS STANDARDS: Each syllabus would provide for indicative standard statements of key domains and learnings to guide teacher judgement and provide a common vocabulary for teachers, students and parents. These would be based on an agreed model of cross-curricular capabilities. The articulation of these standards in comparable judgments would be supported through moderation procedures appropriate

to the subject and phase. The aim of the standards would be to establish a shared vocabulary for talking about the setting of assessable tasks, the judging and gauging of student performance, and the translation of these into useful and comprehensible statements of achievement.

ASSESSMENT: Each syllabus would indicate where systemic standardised instruments and mandated moderated assessment are linked to specific domains and learnings. It would also provide suggested guidelines for school and teacher assessment practices. Technical details, exemplars and models would be available in adjunct materials, such as the proposed common task or project assessment bank.

The technical format of the syllabus would be as follows. We strongly recommend that each of these categories be developed in the order presented, by subject development committees in the consultative process. Each syllabus would contain:

1.   THE SCHOOL SUBJECT:

That it include a statement of the philosophy and logic of the school subject, noting key developments and benchmarks in research on the subject. This would enable curriculum developers to choose stronger alignments with disciplines and applied fields, or more loosely coupled and multidisciplinary relationships as appropriate. It would require that the committee work through these relationships explicitly, referencing key works in the field and explaining a principled position on the subject.

The statement would be brief and defensible. It would preclude an unprincipled 'collection' of outcomes or contents that was not justifiable on foundational grounds or benchmarked against relevant fields. It would make transparent and accessible any paradigm selections from a particular discipline or field.

2.   THE EDUCATIONAL GOALS OF THE SUBJECT:

That it include a statement of the overall educational purposes and goals of the school subject, noting the benefits and value of mastery of the subject and its affiliated learnings. This would enable curriculum developers and teachers to consider how and where mastery of the school subject fits into the philosophy of the system and the overall goals for the development and pathways of students. It would require that the committee engage with and state the overall goals of the subject (e.g., scientific literacy for all, the production of specialised scientific expertise, skills for active citizenship,

values) and briefly state how these would have longitudinal educational benefit to the students, the community and society.

This statement would be brief. It would require that subject content decisions be justified by reference to the overall educational development and benefit of the students. It would preclude content inclusion on the grounds of past inclusion or disciplinary precedent without educational justification.

3.   THE LEARNERS OF THE SUBJECT:

That it include a statement on the phase/age/developmental issues of the diverse communities of learners (e.g., by gender, language, Indigineity, age, location, special needs) that the subject will be taught to. This would enable curriculum developers and teachers to consider how to shape the interpretation and translation of syllabus content and select appropriate resources that match student background knowledge, cultural and linguistic diversity, approaches to learning, prior achievement, and special learning needs. This would require that the committee consider the varied phase-specific cohorts of students likely to study the subject and their diverse resources, capabilities and potential challenges – the equity focus characteristic of high quality/high equity systems. It would require explicit consideration of the instructional and assessment variables impacting on Aboriginal and Torres Strait Islander students.

The statement would be brief but explicit, but it would refer teachers to other systemic policies and possible resources to assist particular student cohorts. Specific targeted instructional materials and advice for cohorts of learners would be provided in adjunct professional resources but not the syllabus. This approach would preclude statements of contents that was not based on due consideration of all learners.

4.   EXPECTED LEARNINGS:

That it include clear, simple and economical statements of expected learnings. These could be framed as any relevant combination of: knowledges, skills, behaviours, performances, experiences, competences, capacities in language technically accessible and useful for teachers. This would enable curriculum developers to focus and define the content of specific school subjects according to different curriculum models. It would enable teachers to select instructional approaches and assessment practices that

fit the learners and the expected learnings. They would be essential and expected for all students, but would not be minimum competency statements.

Each expected learning could be accompanied by a "teacher prompt", several specific heuristic questions that would briefly clarify the expected learning as the teacher turns to consider which relevant lesson planning materials and resources they might consider. These resources would be available from QSA and relevant professional development providers (e.g., universities, professional associations, other jurisdictions) but would not be included in the syllabus document itself.

5.   STANDARDS:

That it include a common nomenclature for describing student performance in the subject. These would be framed as 'aspirational goals' for students and teachers to set as targets for achievement and used for reporting achievement. They would provide the system, teachers, parents and students with a common, accessible vocabulary for gauging their learning. They must set high 'aspirational' standards for all students, be consistent across subject, phase and student groups; and clarify the goals of the system in relation to high quality/high equity and improved public opinion of education in Queensland.

6.   ASSESSMENT:

Linked closely to the standards statements would be notes of relevant assessment strategies to guide the development of systemic, school and classroom assessment and moderation. The documents would note alignments with systemic testing programs and other assessment tasks as appropriate to the subject and phase. The syllabus would not provide explicit guidelines on how to assess per se, but they would refer to relevant documents and approaches provided elsewhere by QSA and relevant professional development authorities.

POLICY ALIGNMENTS REQUIRED FOR THE MODEL

What we have presented in this report is a simple approach to syllabus design, which provides a context for:

- Increased professionalism of teachers;
- Accountability of the system; and,

- A central simple and consistent system to syllabus design.

The approach is underpinned by a set of clear high quality/high equity goals for education in Queensland, based upon:

- The articulation of high expectations and standards for all students;

- The goal of improved learning opportunities and outcomes for all children; and

- Improved public trust in schools and the education system.

This has been a deliberate shift in regards to the past process of syllabus design. The report sets as its aim a new set of 'running rules' for teachers, policy-makers, teacher educators, researchers and scholars, community and industry representatives who develop and write syllabi. We have argued here that changing the syllabus without aligning system and school conditions will not enhance "informed professionalism", is unlikely to change the enacted curriculum, and is unlikely to generate high quality and high equity achievement patterns.

The syllabus design proposed here will set enabling conditions for informed professionalism in pedagogy and assessment aimed at high quality and high equity student achievement. **But it can only set enabling conditions.** It will not be successful without the "delivery standards" of other systemic policies and resources that we have identified here. The following are not 'adjunct' conditions, but are essential to improving the system and to the implementation model suggested within this report:

SYLLABUS DEVELOPMENT PROCESSES: high quality/high equity systems begin from reviews of current syllabi and involve practicing teachers, industry partners and community elders, disciplinary and educational researchers directly in the syllabus development process. They cannot be composed by curriculum experts and then presented in a consultative process after their development. The three stage process should be consistent across subjects and phases and transparent to all stakeholders. The three stages are:

- *Technical and Field Analysis* - A project leader would be responsible for preparing, administering or engaging consultation for a detailed technical analysis of the current syllabus by a team of syllabus, subject and industry experts; focus group sessions in the field for teachers, principals, and

regional/district staff as a way to streamline the feedback process; consultation with relevant faculty members at universities, professional and teachers' groups (eg AATE, MTA), industry and community stakeholders; and international benchmarking against other comparable systems' syllabus documents. We strongly recommend that QSA establish a survey instrument that samples teachers' views on, uses of, and assessments of the existing syllabus. Such an instrument would provide important empirical data on the 'enacted curriculum' at an early stage of the setting of specifications for the syllabus writing. This would balance the presentation of local, anecdotal and heresay evidence about teacher use by teacher and professional 'experts' consulted in the syllabus design process. On the basis of this technical and field evidence, specifications for syllabus writing would be prepared to guide the syllabus writing process.

- *Syllabus Writing* – A first draft should be prepared by teacher writers under the supervision of the project leader. The draft should be provided for wide consultation, then revision; fact and bias checking of content; checking of final program planning considerations (eg. Are literacy and numeracy as priorities embedded appropriately?).

- *Trial and Release* - The syllabus document should be trialled with an appropriate mechanisms for feedback and revision. The QSA and the Department should work to a clearly articulated statement of responsibility to provide implementation support, including professional development and online resources, for all relevant teachers and administrators.

PRESERVICE TRAINING: teacher education curriculum subjects need to be aligned to the syllabus, with student teachers working directly with syllabus documents and adjunct materials. This requires reciprocal commitments from the QSA and teacher education providers and inclusion of university staff in the relevant curriculum areas in syllabus design, development, implementation and trialling.

QUALIFICATION LEVELS: high quality/high equity systems have either put in place or are moving towards the expectation of masters-level qualifications (in education and in relevant cognate fields) for all teachers. There should be an emphasis on qualification upgrades in classroom-based curriculum and assessment. Systemic and professional

incentives for upgrading (e.g., sabbaticals, increments, basic registration requirements, professional development and career pathways) are in place in these systems.

INSERVICE FOR PRINCIPALS AND SCHOOL LEADERS: because school leadership that focuses on curriculum and pedagogy is needed, all principals should receive inservice support on the 'delivery standards' for new curricula and syllabus. This would include description of strategies for resourcing professional development and materials, implementation and professional development.

TEACHER PROFESSIONAL RESOURCES: QSA and authorised providers (e.g., universities, employing authorities, statutory bodies) should provide a range of online and print materials as resources to assist school and cluster-based curriculum development. As in Ontario, QSA should establish means for checking and authorising resources, textbooks, publishers' materials and inservice providers – noting whether or not they are in alignment with the curriculum.

PROFESSIONAL DEVELOPMENT: QSA should have direct input into the alignment of systemic professional development funding and targets, checking for alignment with the curriculum, and assuring that syllabi are adequately represented and supported. Teachers and schools should be accountable to employing authorities and QSA on their use of professional development time and funding to support syllabi.

ASSESSMENT AND ACCOUNTABILITY: continued work is necessary on the implementation of school and teacher-based assessment at all levels. School and classroom based assessment needs to be enhanced, a state-wide bank of assessment tasks, models and templates needs to be established, and teacher moderation processes encouraged at all levels. This will balance the focus on national standardised testing productively, attempt to preclude a narrowing of the curriculum and enhance classroom developmental diagnostic work. School comparative reporting and annual reporting should include performance outcome indicators in these areas to augment testing and matriculation data. A major aim should be to increase teacher assessment expertise and their use of evidence in curriculum interpretation and implementation.

STANDARDS: should provide the basis for a common reporting framework and assessment vocabulary. Standards specified in the syllabus can provide the evolutionary grounds for a common, system-wide vocabulary for assessment, that will enhance communication between teachers about student progress, and enhance parental and

public understanding of student performance. The aim is not technical reliability on the achievement of standards per se, but the development over time of shared professional and community understanding of levels of achievement of expected learnings. These would be enhanced with simple, system-wide messages about "aspirational targets" for all students in expected learnings that are to teachers, students and parents.

CONCLUSION

Redesigning the syllabus can set enabling conditions for high quality and high equity outcomes. It cannot 'cause' change and progress in any direct or simple way. But it can be one of the key elements of an overall system strategy for enhancing teaching and learning. The syllabus must aim towards informed, parsimonious and comprehensible 'prescription' that enhances rather than deters or discourages informed professionalism.

We conclude that:

- The technical form of the syllabus matters: it must enhance professionalism at all levels to achieve equity. It must be accessible and economical. It should provide a 'map' and not attempt to describe an entire field, pedagogy and assessment strategies. These can be provided through adjunct resources for teachers to use as part of informed professionalism.

- Technical form must accommodate different curriculum models, different phases and different paradigmatic approaches to content;

- School subjects stand in variable relationships to disciplines and applied fields;

- School subjects should be organised in relation to well-theorised and understood phases of schooling that thematically align with the overall system goals of high quality and high equity democratic education.

- Syllabi should be part of an aligned system, based on clearly articulated goals, aimed at high quality high equity. As such review, design and implementation must be consistent, transparent and appropriately resourced

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APPENDIX A: COMMISSIONED PAPERS

SEEING SCHOOL SYSTEMS THROUGH THE PRISM OF PISA

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Introduction

If the percentage of students achieving high grades in examinations increases, some will claim that the education system has improved. Others will claim that the requirements for attaining the grade must have been lowered. Behind the suspicion that better results reflect lowered criteria there is often a belief that overall performance in education cannot be raised. However, OECD's Programme for International Student Assessment (PISA), the most comprehensive international assessment to date, shows that some countries do much better than others and provides compelling evidence that excellence in education and, indeed, improvement is possible.

PISA assesses the extent to which students near the end of compulsory education have acquired some of the knowledge and skills that are essential for full participation in society, focusing on student competencies in the key subject areas of reading, mathematics and science. PISA seeks to assess not merely whether students can reproduce what they have learned, but also to examine how well they can extrapolate from what they have learned and apply their knowledge in novel settings, ones related to school and non-school contexts. The latest PISA assessment, carried out in 2006, focused on students' competency in science, offering the most comprehensive international measurement to date in this area. PISA 2006 also examined the attitudes which students had towards science, the extent to which they were aware of the life opportunities that possessing scientific competencies may open, and the science learning opportunities and environments which their schools offered.

Australia's 15-year-olds do well by international standards, even if the relative standing of Australia in reading performance (the only performance area where three consecutive data points are now available) has somewhat declined since the first PISA 2000

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assessment. Table 1 (appended to this paper) illustrates the PISA 2006 science scale, shows that Australian 15-year-olds obtained an average score of 527 points (OECD mean is 500 points with a standard deviation of 100 points). This score ranks Australia 5th among OECD countries, with a confidence interval between 4th and 7th rank. In reading, Australia reached 513 points which equates to rank a of 6 among OECD countries, with a confidence interval between 5th and 7th rank (this score represents a decline of 13 points primarily due to poorer performances by the best performing students). In mathematics, Australia reached 520 points, which is broadly similar to Australia's performance in 2003 and which puts Australia 9th, with a confidence interval of between 6th and 9th rank.

However, even in Australia's strongest performance area, science, Finnish 15-year-olds are almost a school year ahead, and also Canadian students show that further improvement is possible. Equally important, these countries show that poor performance in school does not automatically follow from a disadvantaged socio-economic background of students and that education systems can combine high performance levels with a socially equitable distribution of learning opportunities (Australia also qualifies as one of the countries in which the impact of social background on student performance is weaker than at the OECD average level).

Some education systems show that success can become a consistent and predictable educational outcome: In Finland, the country with the strongest overall results in PISA, the performance variation between schools amounts to just 4 per cent of students overall performance variation such that parents can rely on high and consistent performance standards across the entire school system (see Table 2 appended to this paper). In contrast, in other countries more than half of the OECD average performance variation originates at school and/or programme levels, often combined with only moderate overall performance (in Australia, performance differences among schools amounts still to one fifth of the overall performance variation, with much of these differences closely related to the socio-economic intake of schools, see Table 3 appended to this paper).

The results from PISA 2006 for science are summarised in Figure 1 (appended to this paper). The vertical axis represents the average performance of countries. The horizontal axis represents the amount of performance variation that is accounted for by the social background of students. Countries for which this relationship is stronger than

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for the OECD as a whole are plotted to the left. Countries in which the relationship is weaker are plotted to the right. This horizontal axis can thus be considered as representing the 'social equity' of the education system. The figure is divided into four quadrants by a horizontal line at 500, the mean science score for the OECD as a whole, and a vertical line at 14.4, representing the OECD average strength of the relationship between social background and student performance. The top-right quadrant can be described as 'high-quality, high-equity' compared with the OECD as a whole and the other quadrants can be labelled correspondingly as shown in the figure. The most important feature of the figure is that high quality and high equity can be achieved together.

Monitoring shows how things are. Comparisons with others can show whether more could be achieved. Results from international comparisons therefore inevitably raise the question what countries can do to help students to learn better, teachers to teach better, and schools to be more effective. A cross-national international assessment such as PISA alone cannot identify clear-cut cause-and-effect relationships between certain factors and educational outcomes, especially in relation to the classroom and the processes of teaching and learning that take place there. However, it can identify factors that appear empirically to be "universal" features supporting good quality learning at school and which are specific to particular cultures or systems. Qualitative analysis can then enrich the picture and seek to identify policies and practices that underpin success. All 30 OECD countries, and 27 others, are using PISA to take an outside look at their education systems. All can be provoked by aspects of the performance of others to raise their own expectations.

Combining ambitious standards with strong support systems

Across the OECD area, the shift in public and governmental concern, away from the mere control over the resources and content of education towards a focus on outcomes has driven the establishment of standards for the quality of the work of educational institutions. Many countries have pursued the establishment of a "culture of achievement" that articulates the expectations that society and parents have in relation to learning outcomes and how these expectations translate into the establishment and monitoring of educational goals and standards.

However, where increases in challenges were not paralleled with sufficient investments in teacher professional development, improved technology, or attention to social circumstances, this has sometimes resulted in conflict and demoralisation. Some of the best performing countries in PISA therefore build their success on combining clear and ambitious standards for educational performance with access to best practice and professional development and support for schools. Some of these countries seek to primarily address heterogeneity in the student body, with services directed towards individual students on a needs basis, including services for students requiring special educational or social assistance, or educational and career counselling. Others relate to establishing networks between individual schools and between schools and other institutions aimed at facilitating performance improvement of teachers and schools.

There is also still considerable debate in OECD countries as to how standards can best be harnessed to raise educational aspirations, establish transparency over educational objectives and content, and provide a useful reference framework for teachers to understand and foster student learning while avoiding the risks of narrowing the curriculum and teaching to the test. Some countries have gone beyond establishing educational standards as mere yardsticks and introduced performance benchmarks that students at particular age or grade levels should reach. In these countries, a lively debate often follows on how such performance targets can best be defined to ensure baseline quality in educational outcomes while, at the same time, raising performance and aspirations for all students, including those who face particular disadvantages as well as those who show particular talents. Countries have, indeed, found quite different answers

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to this question. England, for example, defines average student performance at the end of each "key stage"; Finland and Sweden establish minimum performance standards that all students should reach at specified grade levels as well as standards that constitute excellence; while countries like France employ more traditional normative performance standards in which student and school performance is assessed by how far it deviates from a national or school-level average.

Schools, too, can make an important difference to performance orientation in education. The PISA surveys have confirmed a range of other research which suggests that students perform best in a positive learning environment that is oriented towards results. PISA indicates that students and schools perform better in a climate characterised by high expectations and the readiness to invest effort, the enjoyment of learning, a strong disciplinary climate, and good teacher-student relations. Among these aspects, PISA 2003 suggested that students' perception of teacher-student relations and classroom disciplinary climate display the strongest relationships with student performance, across countries (these data were not collected by PISA 2006). Students' perceptions of the extent to which teachers emphasise academic performance and place high demands on students also tended to be positively related to performance, albeit less strongly so. The views which Australian school principles in PISA expressed suggest that more could be done on some of these dimensions. 31% of school principals reported in 2003 that learning is hindered by teachers' low expectations of students, 48% report that learning is hindered by teachers not meeting individual students' needs and 34% report that learning is hindered by staff resisting change. In contrast, when it comes to the strength of teacher-student relations, Australia compares very favourably: When asked about their mathematics classes, 64% reported in 2003 that their teacher shows an interest in every student's learning (OECD average 58%), 85% reported that the teacher helps students with their learning (OECD average 73%), and 72% reported that the teacher continues teaching until all students understand (OECD average 62%) (again, most of these questions were not posed in 2006 because the focus of PISA had shifted to other issues). Few OECD countries showed much stronger levels of teacher support, when the various dimensions of teacher support are combined on an index.

The establishment of performance standards lead to the question of how they can be implemented and assessed and combined with effective mechanisms to feed results back

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to teachers and school principals. Assessments of student performance are now common in many OECD countries - and often the results are widely reported and used in public debate as well as by those concerned with school improvement. However, the rationale for assessments and the nature of the instruments used vary greatly within and across countries. Methods employed in OECD countries include different forms of external assessment, external evaluation or inspection, and schools' own quality assurance and self-evaluation efforts. There are also diverging views on how results from evaluation and assessment can and should be used. Some countries see them primarily as tools to reveal best practices and identify shared problems in order to encourage teachers and schools to co-operate and develop more supportive and productive learning environments. Others extend their purpose to support contestability of public services or market-mechanisms in the allocation of resources, e.g. by making comparative results of schools publicly available to facilitate parental choice or by having funds following students performance on tests.

Sharing decision-making responsibility between government and schools and accountability policies

Increased autonomy over a wide range of institutional operations, with the objective of raising performance levels through devolving responsibility to the frontline and encouraging responsiveness to local needs, has been a main aim of the restructuring and systemic reform since the early 1980s.

In fact, in most of the countries that performed well in PISA, local authorities and schools now have substantial autonomy with regard to adapting and implementing educational content and/or allocating and managing resources. It is noteworthy that the trend towards devolved responsibility has not been uniform across the different areas of decision-making. In some countries, the development and adaptation of educational content can be considered the main expression of school autonomy. Others, by contrast, have focussed on strengthening the management and administration of individual schools through market-oriented governance instruments or collaboration between schools and other stakeholders in local communities while, in some cases, even moving towards centralised governance of curricula and standards. In PISA 2006, school principals reported varying amounts of control over the management of their schools. In most countries, for example, they do not have much power over setting salaries. In

other aspects, the picture is more varied. Principals were asked to what extent schools decide on matters. They reported that:

> The appointment of teachers was solely a school responsibility for almost all schools in 12 countries, but for almost no schools in seven countries. At least 95% of students attend schools where principals reported that the school took sole responsibility for this in the Slovak Republic, New Zealand, the Netherlands, the Czech Republic, Iceland, Sweden, the United States and Hungary, and in the partner countries/economies Lithuania, Montenegro, Macao-China and Estonia. Fewer than 10% were enrolled in such schools in Turkey, Greece, Italy and Austria, and the partner countries Romania, Tunisia and Jordan.

The setting of budgets was solely a school responsibility for schools enrolling at least 90% of students in the Netherlands and New Zealand and in the partner countries/economies Jordan, Macao-China, Indonesia and Hong Kong-China, but fewer than 10% in Poland and the partner country Azerbaijan.

The determination of course content was solely a school responsibility in schools with 90% of students in Japan, Poland and Korea, as well as in the partner countries/economies Macao-China and Thailand. But in Luxembourg, Greece and Turkey and the partner countries Tunisia, Serbia, Montenegro, Uruguay, Croatia, Jordan and Bulgaria fewer than 10% of schools reported determining content solely on their own.

Within countries, students in schools that exercise greater autonomy do not on average get better results. However, students in countries where autonomy is more common tend to do better in the science assessment, regardless of whether or not they themselves are enrolled in relatively autonomous schools. This is true for the aspects of school autonomy in formulating the school budget and deciding on budget allocations within the school, even after accounting for socio-economic background factors as well as other school and system level factors. These results suggest that greater autonomy has a general impact at the system level, perhaps deriving from the greater independence of school managers in systems that authorise choice of responses to local conditions.

While countries with greater levels of school autonomy in particular areas tended to perform better in PISA, a concern is that greater independence of schools might lead to greater inequalities in the performance of schools. One way to examine this is by relating the PISA measures of school autonomy to the proportion of student

performance differences that lies between schools. This comparison does not reveal a consistent relationship, and therefore suggests that greater school autonomy is not necessarily associated with greater disparities in school performance, as long as governments provide a framework in which poorer performing schools receive the necessary support for improvement. In fact, Finland and Sweden, among the countries with the highest degree of school autonomy on many of the measures used in PISA display, together with Iceland, the smallest performance differences among schools.

In essence, the PISA comparison brings into focus a model of a flexible school system that offers schools a high level of individual responsibility while simultaneously ensuring their accountability and maintenance of standards, through a system of evaluation and targeted and intensive intervention where problems are greatest. Decentralisation (under the catchphrase "school autonomy") and external evaluation are not, as is sometimes claimed, diametric opposites, but rather an interrelated part of governance of the school system.

Greater devolution of the responsibility for schooling has, in many countries, driven the creation of stronger and more visible systems of accountability for educational performance. However, PISA 2006 shows that these vary in type and strength from country to country.

On average across OECD countries, 65% of 15-year-olds were enrolled in schools where principals reported that performance data were tracked over time by an administrative authority. However, this ranged from over 90% in the United States, the United Kingdom, New Zealand, Mexico and Canada, as well as in the partner countries the Russian Federation and Kyrgyzstan, to over 80% in Australia, the Netherlands, Sweden, Iceland, Turkey and Luxembourg, as well as the partner countries Montenegro, Estonia, Brazil, Qatar, Croatia, Thailand, Tunisia, Jordan and Colombia, to less than 36% in Switzerland, Denmark, Italy and Japan.

On average across OECD countries, 43% of 15-year-olds were enrolled in schools where principals reported that they used performance data in the evaluation of teacher performance. In the United Kingdom, Hungary and the Czech Republic, as well as the partner countries the Russian Federation, Kyrgyzstan, Azerbaijan, Romania, Indonesia, Israel, Qatar and Latvia, this was more than 90%. In Poland and Mexico, as well as the partner countries Thailand, Estonia, Lithuania, Jordan and Tunisia, it was still more than

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80%. However, in Luxembourg, Switzerland and Greece this happened in less than 10% of the schools and in Finland, Belgium and Canada in less than 20% of the schools. In most countries, student performance data were used more frequently to evaluate the performance of teachers than of principals, sometimes considerably so.

The use of performance data for decisions on instructional resource allocations tended to be less common. On average across OECD countries, 30% of 15-year-olds were enrolled in schools that reported such practices, but this varied from over 85% in the partner countries Chile and Indonesia to less than 10% in Greece, Iceland, Japan, Luxembourg, Finland, Hungary and the Czech Republic.

There remain also diverging views on how results from evaluation and assessment can and should be used. Some see them primarily as tools to reveal best practices and identify shared problems in order to encourage teachers and schools to improve and develop more supportive and productive learning environments. Others extend their purpose to support contestability of public services or market-mechanisms in the allocation of resources, e.g. by making comparative results of schools publicly available to facilitate parental choice. A related question concerns the extent and ways in which information on student performance should be made available to parents and the public at large.

On average across OECD countries, the majority of students (54%) were enrolled in schools, where school principals reported giving feedback to parents on their child's performance relative to the performance of other students at the school. In the Slovak Republic and the partner countries Indonesia, Azerbaijan, Romania, Serbia, Jordan, Kyrgyzstan and the Russian Federation, this held for more than 90% of students, while in Sweden, Finland and Italy this was only between 12 and 19%.

In many OECD countries, the reporting of student performance information to parents is more commonly done relative to national benchmarks than relative to other students in the school. For example, in Sweden only 12% of 15-year-olds were enrolled in schools that reported performance data to parents relative to those of other students in the school, while 94% of 15-year-olds were enrolled in schools that reported data relative to national or regional standards or benchmarks. The pattern was similar in Japan, Finland, Norway, the United Kingdom, New Zealand as well as the partner country Estonia.

It was far less common for parents to receive information on student performance in their school relative to students in other schools.

Providing assessment information to parents is one thing, but a more widely debated question in many countries – and not just in Australia - is to what extent and how results from accountability systems should be made publicly available.

In the United Kingdom and the United States, school principals of more than 90% of 15-year-olds enrolled in school reported that school achievement data were posted publicly; in the Netherlands, as well as the partner countries Montenegro and Azerbaijan, this was still the case for more than 80%. In contrast, in Finland, Belgium, Switzerland and Austria, as well as in the partner country Argentina, this was the case for less than 10% of the students and in Japan, Spain, Germany, Korea and Ireland, and in the partner countries/economies Macao-China, Uruguay, Indonesia and Tunisia, it held for less than 20%.

Engaging with an increasingly diverse student body

Much of the difference in average performance of countries in PISA can be explained by the prevalence of poorly performing students and schools. Similarly, countries vary much more in the performance of students from disadvantaged socio-economic contexts than in the performance of students from advantaged backgrounds. This suggests that raising performance levels depends critically on the capacity of education systems to address the needs of poorly performing students and schools.

Performance variation between schools provides a particular challenge for quality and equity in education systems. PISA has taken the analyses of equity-related issues further by separating equity-related issues between those that relate to the socio-economic heterogeneity within schools and those that relate to socio-economic segregation through the school system. This allows examination of the extent to which education systems moderate or reinforce socio-economic background factors. In countries like the Netherlands, the Czech Republic, Belgium, Austria and Germany, but to a somewhat lesser extent also in Australia, high-performing students are grouped in high-performing schools and tend strongly to come from advantaged social backgrounds. In contrast, poorly-performing students are grouped in poorly-performing schools and tend strongly to come from disadvantaged social backgrounds. The consequence is that there is very

little relationship between students' social background and their achievement within schools, the range having been restricted on both variables. In Finland and Canada, by contrast, there is little effect of grouping in schools. In these countries, the relationships between social background and achievement are similar at all three levels: overall, between schools and within schools. Spain belongs to this latter group of countries too.

In some of the countries in which a considerable proportion of the total variance is between schools, this is a consequence of education policy. In Germany, for example, students are sorted into schools of different types from age 10 on the basis of achievement at that stage and a judgement of whether a more academic or vocational school would be most appropriate for the next step. The deliberate intention of the policy is to reduce variation within schools, by bringing relatively similar students together, and to increase variation between schools that will then be reflected in differences between the schools in curricula. Of course, in no country are students deliberately sorted into schools on the basis of social background but the consequence of the sorting that does occur is to sort on social background as well. In many countries the consequence is that students from more privileged social backgrounds are directed into the more prestigious academic schools which yield superior educational outcomes (as indicated by their higher performance on the PISA measures) and students from less privileged social backgrounds are directed into less prestigious vocational schools which yield poorer educational outcomes (as indicated by lower performance on the PISA measures). The school organisation, therefore, both reflects and reproduces existing social divisions.

The approaches countries have chosen to address socio-economic differences vary. Some countries offer non-selective school systems that seek to provide all students with similar opportunities for learning. Other countries respond to diversity by forming groups of students of similar levels of performance through selection either within or between schools, with the aim of serving students according to their specific needs.

The effectiveness of these policies and practices remain debated but the results from PISA suggest that both overall variation in student performance and performance differences between schools tend to be greater in those countries with rigid institutionalised selection and tracking practices at early ages. By contrast, virtually all countries that performed well in PISA place an emphasis on strategies and approaches

for teaching heterogeneous groups of learners within integrated education systems, with a high degree of individualised learning processes and strong student teacher-relations. A long-term trend in OECD countries has been to reduce the amount of separation and tracking in secondary education. The most recent major example of this is Poland, whose reading results before and after this education reform are reported in PISA. Here, an improvement in results among lower ability students immediately after the reform was not at the expense of higher ability students, whose results also rose in the subsequent period.

Conclusion

Combining ambitious standards with strong support systems, and balancing devolution in decision-making with effective instruments for governments to intervene where things go wrong are among the policy strategies pursued in many of the education systems that did well on PISA. But perhaps the biggest challenge for modern education systems lies in making education a knowledge-rich educational profession in which teachers and school principles have sound evidence on which to act, and access to effective support systems to assist them in making choices and implementing change. Currently, reality seems often still far from this. What do parents really know about what students learn, and how they learn? How does a teacher in the classroom profit from the experience of the teacher in the classroom next door? And how do schools learn from each other, and with each other? In fact, how much further could education system be if they would know what teachers and school leaders do know, i.e. if they would succeed in bringing together and linking the potential that is in the minds of the highly qualified teaching force - not just for the delivery of instruction in the classroom, but for creating a truly knowledge-based educational profession? The reality is that often, there is insufficient room for parental involvement, teachers are confronting difficult problems in their classes in isolation, and schools operate without knowing much of their strengths and weaknesses and the results of their efforts. And in the darkness, all students, schools and education systems look the same, and when little is known about the strengths and weaknesses of schools and education systems, it is difficult to support them effectively.

No doubt, education has always been a knowledge industry in the sense that it is concerned with the transmission of knowledge, but it has yet to become a modern

knowledge industry in the sense of one constantly transformed by the latest intelligence on best practices. There is a large body of research about learning but much of it is unrelated to the kind of real-life learning that is the focus of formal education. Even that which is available has an insufficient impact because education is dominated by local practitioners working in isolation and relying on folk wisdom about what works. Central prescription of what teachers should do, will not transform teachers' practices in the way that professional engagement in the search for evidence of what makes a difference can.

As a result, education systems find it often difficult to enable schools and teachers to share, jointly develop and implement knowledge about their work and performance. While those who run education systems may have access to some evidence on school performance, those who deliver educational services at school often do not, or face obstacles in translating such knowledge into effective classroom practices.

Some countries leave the establishment of instructional policies and practices entirely to teachers and schools. However, it takes capacity to build capacity, and if there is insufficient capacity to begin with in schools, uninformed professional judgement in individual classrooms or schools often leads to underperformance and idiosyncratic school results. Moreover, in an environment that is knowledge-poor, schools and teachers often end up working in isolation (see the lower right corner in Figure 2 below).

Other countries centrally prescribe educational development, seeing the roles schools and teachers primarily in terms of implementation, but this has often led to demoralised teachers who implement prescribed curricula which they do not own (see the lower left corner in Figure 2). Some have begun to link prescription with devolved responsibility, good data and clear targets as well as access to best practice and quality professional development in order to give schools and teachers some role in development and improvement (see the upper left corner in Figure 2). Such "informed prescription" does have the virtue of providing good ideas to a system that does not have them, and there are indeed numerous examples where pressure to compliance with central directives has succeeded in bringing about large scale changes quickly. The downside, however, has often been the creation of a culture of dependence and reduced professional autonomy.

Figure 2: Moving towards a "knowledge-rich" educational future

The future of education needs to be knowledge rich
including advanced feedback mechanisms in which teachers and schools jointly develop and share knowledge and receive systematic feedback

c) Informed prescription

Informed professional judgement, the teacher as a "knowledge

National prescription ← → **Professional**

b) Uninformed prescription, teachers merely implement

a) Uninformed professional judgement, teachers often feel left alone and isolated from

The tradition of education is often knowledge poor
Education systems have not managed to make knowledge the central resource, which teachers share, exchange and jointly develop

Ultimately, therefore, the challenge for modern education systems is to create a knowledge-rich profession in which those responsible for delivering educational services in the frontline have both the authority to act and the necessary information to do so intelligently, with access to effective support systems to assist them in serving an increasingly diverse client base of students and parents.

SCHOOL SUBJECT AND ACADEMIC DISCIPLIES: THE DIFFERENCES

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Disciplinarity has a grip on much of the discourse on curriculum policy and instructional practice. Schools are mandated to teach academic disciplines like mathematics, chemistry, geology, history, and economics to the future generations. Teachers are supposed to work with and transform the content of an academic discipline for classroom teaching. Lurking beneath the surface of this discourse is a conceptual distinction that has not received sufficient attention from policymakers, researchers and educators—the distinction between school subjects and academic disciplines (Stengel, 1997). Yet this distinction is crucial for a proper understanding of curriculum development and pedagogical practice.

The purpose of this article is to clarify the differences between school subjects and academic disciplines, and in so doing, to argue for the centrality of school subjects in curriculum development and pedagogical practice. By school subjects, I refer to courses of study and programs formulated for the purposes of schooling that constitute the building blocks of the school curriculum. By academic discipline, I mean fields of study or branches of learning formulated for the advancement of knowledge and the professional training of researchers and academics, which are normally housed in academic departments in a university. This paper examines three essential factors— purposes and aims of schooling, the processes of curriculum making, and teachers' professional understanding of content—that set school subjects apart from academic disciplines.

Aims of schooling: curricular ideologies and discourses

Over the last century schooling has been asked to serve four different aims that are reflected in four curricular ideologies: *academic rationalism*, *humanism*, *social efficiency*, and *social reconstruction*. Academic rationalists construe the primary aim of education as initiating students into the academic disciplines through specific bodies of

knowledge, techniques, and ways of knowing. Humanists on the other hand define the central goal of schooling in terms of fostering students' potential, personal freedom, and self-actualization. For the advocates of social efficiency, the central purpose of schooling is to provide the current and future manpower needs of a society. And for social reconstructionists, schooling is primarily an instrument for ameliorating social problems (inequalities, injustice, poverty, etc.) and engendering social reform and reconstruction (cf. Eisner & Vallance, 1974; McNeil, 1996). These four competing ideologies have continued salience in ongoing curriculum policy debates, each of which embodies a distinct version of what knowledge is of most worth.

In the twenty-first century three curricular discourses, *autonomous learners, participatory citizenship*, and *globalization,* have become rather influential in the debates, which can be viewed as "new" humanism, social efficiency and, to a certain extent, social reconstruction. These discourses argue that contemporary schooling should allow individual learners to construct their own knowledge base and competences. It should prepare young people for their future role as active, responsible, and productive citizens in a democratic society. Furthermore, schools are expected to be instrumental in equipping individuals for the challenges created by globalization and the knowledge-based economy. These discourses have been employed by governments across the globe as the rationales for changing curriculum content (cf. Rosenmund, 2006).

The above diverse aims and expectations of schooling entail different implications for how school subjects should relate to academic disciplines. There are three possible juxtapositions in which the above curricular ideologies and discourses find their respective locations.

Three juxtapositions

According to Stengel (1997), there are three broad juxtapositions between academic disciplines and school subjects:

- School subjects and academic disciplines are essentially continuous;

- School subjects and academic disciplines are basically discontinuous; and

- School subjects and academic disciplines are different but related.

Each of the juxtaposition implies a particular curricular position concerning how a school subject is constructed.

Continuous

The continuous relationship is embedded in academic rationalism — an ideology that underscores the importance of transmitting disciplinary knowledge for the development of the intellectual capacity of students and for the maintenance or reproduction of academic culture. This is epitomized in what is called *the doctrine of disciplinarity*, according to which school subjects are derived from and arranged according to, the "structure" of academic disciplines (Tanner & Tanner, 1995). In other words, school subjects, "derive their life, their viability, from their related intellectual discipline" (Davis, 1998, p. 207). They become a faithful and valid introduction to academic disciplines whose names they bear. Disciplinarity is alive and well in contemporary discourse on curriculum policy and teachers' professional development, albeit in different forms (for a detailed discussion, see Deng & Luke, 2008).

This curricular position is fraught with problems. Its exclusive reliance on academic disciplines in defining and delineating school subjects leaves out other kinds of knowledge (e.g. practical knowledge, technical knowledge, tacit knowledge, local community knowledge, etc.) that could be potential curriculum content. Curriculum development framed by this approach ignores the interests, attitudes, and feelings of learners. Furthermore, this curricular position shows little concern about meeting social, economic, and political needs, and is silent on issues about social reform and reconstruction. According to Tanner & Tanner (1995), the disciplinary doctrine "emphasized knowledge specialism to the neglect of general education and democratic citizenship, and failed to address the deepest social problems" (p. 437).

Discontinuous

School subjects and academic disciplines are essentially discontinuous in purpose and content. This position finds support in humanism, social efficiency, and social reconstruction. Humanistic educators argue that school subjects are created to provide students with "intrinsically rewarding experiences" that contribute to the pursuit of self actualization, personal growth, and individual freedom (McNeil, 1996). School subjects, therefore, need to be formulated according to the interest, attitudes, and developmental stages of individual students. They need to derive content from a wide range of

sources—such as personal experiences, human activities, community cultures and wisdoms—in addition to academic disciplines.

From the perspective of social efficiency, school subjects are constructed for the primary purpose of preparing future citizens with the requisite knowledge, skills and capital for economic and social productivity. The formation of school subjects, therefore, is justified with close reference to the needs of occupation, profession and vocation. Applied disciplines (e.g., engineering, accounting, and marketing, among others), therefore, are the primary sources from which the contents of school subjects are derived. Academic disciplines are drawn upon only when they demonstrate their efficacy in promoting those skills and knowledge actually needed in occupations. For social reconstructionists, school subjects are created to provide students with meaningful learning experiences that might lead to emancipation and engender social agency. To this end, the formation of school subjects is based upon an examination of social contexts, social issues and futures, with the intention of helping individuals reconstruct their own analyses, standpoints, and actions. Like humanistic educators, social reconstructionists believe that school subjects derive contents from a wide range of sources. Academic disciplines are used only as they relate to the contexts and issues examined.

The three contemporary curricular discourses—autonomous learners, participatory citizenship, and globalization—further set school subjects apart from academic disciplines. These discourses call for a learner-oriented (rather than discipline-centered) approach to the construction of a school subject that allows learners to construct their own knowledge according to their individual needs and interests. They require the school subject to be formulated in ways that help students cultivate certain kinds of sensitivity, disposition, and awareness needed for responsible civic participation in an increasingly globalized society. They call attention to the need of equipping students with generic competences and lifelong learning abilities considered to be essential for facing the challenges of globalization and the knowledge-based economy (cf. McEneaney & Meyer, 2000; Rosenmund, 2006). This is illustrated in the section below using the case of Liberal Studies as a core secondary-school subject in current curriculum reforms in Hong Kong.

Different but related

The third juxtaposition has three possible permutations that demonstrate the relationship between school subjects and academic disciplines can exist in one of the three ways: (a) that academic disciplines precede school subjects, (b) that school subjects precede academic disciplines, or (c) that the relation between the two is dialectic (Stengel, 1997). Position (a) holds that a school subject results from the transformation of an academic discipline. This taken-for-granted view is always employed in conjunction with the continuous position, viewing the purpose of education as the acquisition of disciplinary knowledge. The two other positions are of more theoretical than practical interest. Position (b) is reflected in Herbartian theory of recapitulation, according to which parallels exist between the stages in the historical development of disciplinary knowledge and the stages through which the individual passes on the way to maturity, and therefore, school subjects are formulated to reflect those parallels (Kliebard, 1992). School subjects come first and academic disciplines later in one's learning journey from school to university. Position (c) came be viewed as a combination of positions (a) and (b), which is epitomized in Dewey's (1902/1990) classic text, *The Child and the Curriculum*. For Dewey, an academic discipline provides the endpoint for the formation of a school subject and the school subject furnishes the avenue for getting to know the academic discipline (for a detailed discussion, see Deng, 2007; Stengel, 1997).

So far our discussion is primarily at the institutional or political level, with a focus on curricular ideologies and discourses that distinguish and relate school subjects and academic disciplines. The discussion supports that school subjects are distinctive purpose-built enterprises, constructed in response to different social, cultural and political demands and challenges. The discussion now examines how particular curricular ideologies and discourses are translated into a school subject by looking at the curriculum making processes involved.

The formation of a school subject

The formation of a school subject, broadly construed, involves three levels of curriculum making, the *institutional*, the *programmatic*, and the *classroom*, each of which yields a distinct kind of curriculum.

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The institutional curriculum embodies a conception of what schooling should be with respect to the society and culture. Curriculum making at this level is characterized by ideologies and discourse on curriculum policy at the intersection between schooling, culture, and society. Thus the curriculum 'typifies' what is desirable in social and cultural orders, what is to be valued and sought after by members of a society or nation (Doyle, 1992a, 1992b).

The programmatic curriculum is contained in curriculum documents (e.g., syllabus) and materials for use in schools and classrooms. Curriculum making at this level translate the institutional curriculum into school subjects, programs, or courses of study provided to a school or system of schools (Doyle, 1992a, 1992b; Westbury, 2000). The process of constructing a school subject or a course of study entails the selection and arrangement of content (knowledge, skills, and dispositions) and the transformation of that content for school and classroom use. It involves a "theory of content" with respect to both the institutional expectations and the activities of teaching (Doyle, 1992b).

The classroom curriculum is characterized by a cluster of events jointly developed by a teacher and a group of students within a particular classroom (Doyle, 1992a, 1992b). Curriculum making at this level involves transforming the programmatic curriculum embodied in curriculum documents and materials into "educative" experiences for students. It requires further elaboration of the programmatic curriculum, making it connect with the experience, interests, and the capacities of students in a particular classroom (Westbury, 2000).

From this perspective, a school subject is formed as the result of the translation of curricular ideologies and discourses into curriculum documents and materials, entailing a theory of content—that is, a particular way of selecting, organizing, framing and transforming the content for curricular and instructional purposes. In a classroom the realization of a school subject depends largely on a teacher's effort in interpreting and transforming the curriculum documents or materials, which is shaped by his or her understanding of the content—more precisely, the theory of content—inherent in the school subject.

The above claims can be illustrated by the formation of Liberal Studies in the current context of curriculum reforms in Hong Kong. Mandated as a core school subject in the

New Senior Secondary (NSS) Curriculum[1], Liberal Studies is to be taught in all secondary schools from September 2009. At the institutional level or political realm, Liberal Studies is conceived as a curriculum innovation in response to the changing social, economic, and political contexts—characterized by globalization, knowledge-based economy, and increasingly close ties with mainland China. The central purpose of this subject is to broaden students' knowledge base, enhance their social awareness, cultivate positive attitudes and values, and develop critical thinking, adaptability and lifelong learning capacities—qualities believed to be important for facing the challenges of the twenty-first century.

At the programmatic level, this innovation is translated into a curriculum document that lays out the curriculum framework and related instruction and assessment guidelines (cf. CDC & HKEAA, 2007). Underlying the curriculum framework is a special way of selecting, organizing, and framing content which is intended to serve the central purpose of the subject, thus constituting the theory of content in Liberal Studies. Content is selected and organized via a "student-oriented approach" with the intention to "help students understand themselves, and their relations with others and the environment in which they live" (p. 4). Accordingly, three broad areas of concerns are identified, namely "Self and Personal Development," "Society and Culture," and "Science, Technology and the Environment." These three areas are further divided into six learning modules that include topics relating to personal development and interpersonal relationships; contemporary Hong Kong society; modern China; globalization; public health; and energy technology and the environment. Subject content is framed with the intention to support cross-curricular and issue-based inquiry approaches to teaching and learning. Each module is framed in terms of themes, each of which embodies key concepts and key issues for inquiry. For each theme, the framework suggests related issues for exploration and related values and attitudes that teachers can help students

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[1] Other core subjects include Chinese Language, English Language, and Mathematics. The NSS curriculum is developed in line with the new "3+3+4" system, according to which three years in the lower secondary system will be followed by a further three years in the senior secondary school for all students, and the length of a normal undergraduate degree will be extended to four years.

develop. In addition, the subject provides students with opportunities to shape their own learning trajectory by introducing an Independent Enquiry Study (IES), a research project in which students apply knowledge and perspectives gained from the three areas of study to explore selected curricular themes (e.g., media, education, and religion) that cater to their interests and aspirations.

Classroom teachers are supposed to develop school-based curriculum on the basis of the Liberal Studies curriculum framework. They are expected to interpret and translate the content (i.e., the theory of content) embodied in the framework into instructional events and activities, with close reference to students' existing knowledge and experiences. They are expected to build and expand upon what students already know, engaging them in the process of constructing their own knowledge and competences.

The above discussion foregrounds the notion that a school subject is the end product of a creative development process. It is introduced into schools and classrooms as a distinct representation of content, characterized by particular processes of selection, organization and framing for educational purposes. The content of a school subject, in other words, is an embodiment of the designers' intentions, containing educational potential. The assumptions for curriculum designers of Liberal Studies is that the content, once students have explored it in a way that is consistent with their intentions, will broaden student perspectives, develop positive attitudes and values, and enhance their social awareness and critical thinking skills. Yet in a classroom the disclosure of the educational potential inherent in content largely depends on the interpretive efforts of a classroom teacher (Ben-Peretz, 1990). It requires teachers' professional understanding of the content of a school subject, to which we should now turn.

Knowing the content of a school subject

In educational circles there is a strong tendency to emphasize the necessity of teachers' understanding of the content of an academic discipline—rather than the content of a school subject. This tendency finds support in the influential theoretical framework developed by Shulman and Associates at Stanford (see for example, Grossman, Wilson, & Shulman, 1989; Shulman, 1986, 1987; Wilson, Shulman, & Richert, 1987). The fundamental premise of this group of researchers is that teachers need to have three kinds of subject matter knowledge: *content knowledge*, *pedagogical content knowledge*,

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and *curricular knowledge*[2]. Content knowledge includes knowledge of the substance and structure of the academic discipline. Pedagogical content knowledge involves an understanding of pedagogical representations and instructional strategies, and of students' pre-conceptions with respect to particular curriculum topics at particular grade levels. By means of this knowledge, the teacher transforms his or her disciplinary content into "forms that are pedagogically powerful and yet adaptive to the variations in ability and background presented by students" (Shulman, 1987, p. 15). In contrast, curricular knowledge involves an understanding of the curriculum and the instructional materials available for teaching a subject at various grade levels. Underlying their framework are two assumptions: 1) that school subjects and academic disciplines are essentially continuous in substance and practice; and 2) that classroom teachers necessarily work with and transform the content of an academic discipline into the content of a school subject (Deng, 2007).

The underlying assumptions of the Shulman and associates framework indexes a commitment to *the doctrine of disciplinarity* (Deng, 2007; Deng & Luke, 2008). It is inevitably fraught with problems inherent in the continuous juxtaposition of school subjects and academic disciplines discussed earlier. As far as teachers' professional understanding of content is concerned, the authors' unproblematic reliance on the academic discipline as an essential frame of reference for defining and delineating teachers' professional understanding of content tends to overlook what is involved in knowing the content of a school subject for teaching.

The argument proposed here is that teachers do need basic knowledge of related academic disciplines, but knowing the content of a school subject lies at the heart of their professional understanding. School subjects, not academic disciplines, constitute the "locus" of classroom teaching; they frame classroom teachers' practice and perspectives on curriculum and instruction (Grossman & Stodolsky, 1995). Knowing the content of a school subject involves knowing more than the content per se; it entails knowing how the content is selected, formulated, framed, and transformed in ways that

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[2] In addition to these three categories of subject matter knowledge, Shulman and associates believe that teachers need to have knowledge of general pedagogy, of learners, of contexts, and of educational purposes.

render meaningful and educative experiences for students. This knowing is crucial for disclosing the educational potential inherent in the content. To illustrate it is useful to compare what is involved in knowing the content of a secondary-school science subject (such as physics, chemistry, and biology) with the content of Liberal Studies.

Knowing the content of a secondary-school science subject involves knowing five intersecting aspects or dimensions, *logical*, *epistemological*, *psychological*, *pedagogical*, and *sociocultural*. The logical is represented by a body of concepts and principles embodied in the school curriculum that constitute the 'landscape' of the subject. There is an underlying 'geology' that accounts for how this landscape can be developed, formulated, and organized, and connected with the landscapes of other secondary-school subjects, characterized by ways of linking the logical with the psychological, epistemological, and socio-cultural planes. Knowing the content involves knowing the psychological (concerning how the concepts and principles to be taught can be developed out of the interest, experience, and prior knowledge of students), the epistemological (concerning how we know these concepts and principles and how they come to reach its present refined form), the pedagogical (concerning the effective ways of representing and reformulating the concepts and principles), and the socio-cultural (concerning how knowledge relates to and interacts with society, technology, and culture). In other words, the teacher needs to know how the logical can be formulated and transformed on the psychological, epistemological, pedagogical, and socio-cultural planes, so as to render meaningful and educative experiences to students (Deng, 2007).

By comparison, knowing the content of Liberal Studies entails knowing how content can be organized, framed and transformed into learning experiences in order to broaden students' perspectives, enhance their social awareness, develop positive attitudes and values, and foster problem-solving and critical thinking skills. With respect to a particular module (e.g., public health) in Liberal Studies, four aspects are essential for knowing the content: namely *inquiry framing* (framing content for cross-curricular and issue-based inquiry), *socio-cultural framing* (framing content with reference to socio-cultural contexts), *psycho-epistemological framing* (framing content with reference to the curricular or knowledge context of students), and *pedagogic translation* (translating content into teaching and learning activities and selecting instructional resources). Each of these aspects can be characterized by a set of initial probing questions.

Inquiry framing

- What are the themes and key issues (i.e., questions for inquiry) pertaining to the module?

- What are the key concepts that underlie each of the themes? How are these concepts related to the concepts in other modules?

- What are the related issues for exploration?

Socio-cultural framing

- What significance do the key issues and related issues have for students, the society and the world?

- How might these issues arise from various socio-cultural contexts?

- What different perspectives can be brought to bear on addressing these issues?

- What kinds of critical thinking can be encouraged? What attitudes and values are worthy of cultivation?

Psycho-epistemological framing

- What prerequisite knowledge and skills are needed for learning the issues and concepts?

- How might the key issues and concepts connect with what students learn in other school subjects or from other learning experiences in the curriculum?

- What do students have already known and experienced in relation to these issues and concepts?

- How might their existing knowledge and experience be drawn upon for learning the issues and concepts?

Pedagogic translation

- On the basis of the above considerations, what could be teaching and learning activities (e.g., group discussion, debate, role-play, project work, and independent inquiry) that could broaden students' perspectives and provide them with opportunities for problem-solving, independent learning, and cross-curricular and critical thinking?

- What resources (e.g., the media, IT software, and the internet) could be employed for achieving the instructional purposes?

These four aspects are interrelated, and together constitute teachers' professional understanding of the content of Liberal Studies.

Concluding remark

School subjects are not given, nor are they direct translations of academic disciplines. They are human constructions in response to social, economical, cultural, and political realities and needs. At the programmatic or curricular level, school subjects are "uniquely purpose-built educational enterprises, designed with and through educational imagination towards educative ends" (Deng & Luke, 2008, p. 83). The formation of a school subject entails a theory of content—a special way of selecting, framing and translating content for educational purposes. Knowing the theory of content inherent in a school subject lies at the heart of a teacher's professional understanding of content.

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CURRICULAR CONVERSATIONS: LITERACY TEACHING AND LEARNING IN THE MIDDLE YEARS

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A curriculum that seeks "equity of engagement in common and diverse cultural conversations" has set for itself an educationally critical but politically challenging agenda. Embedded within these few words are powerful conceptual binaries that have animated some of the most significant educational discussions of the last quarter century. While frequently deconstructed in the theoretical literature, these binaries have remained stubbornly resistant to resolution in the worlds of curricular and teaching practice. In what follows, we will describe three of these binaries, placing them briefly in their historical and political contexts, explaining the challenges they represent, and arguing for their importance within a comprehensive literacy curriculum for the middle-years.

Common and Diverse Cultural Conversations

The "and" which both joins and separates "common" and "diverse" in this phrase represents a politically charged pivot point that has shaped decisions across schooling contexts, from state and district-wide funding formulas to textbook design, to assessment practices. Fuelled by the culture wars (Bennett, 1993; Bloom, 1987; Hirsch, 1987; Ravitch & Ravitch, 2007) and the political configurations that abetted and extended those wars (Cross, 2004), the 80s and 90s saw a series of extended, often networked efforts to establish common cultural materials as the central core of the literacy curriculum. These efforts essentially defined themselves as a specific opposition to educational movements that were often labeled as "softening" or "weakening" or "diluting" the more traditional cultural curriculum. The latter represented an effort to

extend the boundaries of the literacy curriculum to include multicultural texts and multimodal forms of media—an inclusion that invited a range of new pedagogies and literacy practices (Cope & Kalantzis, 2000; Freedman et al., 1999).

In curricular practice, this tension was often resolved in district curricula and textbooks by attempting inclusion while providing a stable range of traditional literature and genres. In such efforts, a canonical poem might be thematically paired with an aboriginal song, say, or a lyric from South Africa, Afghanistan, or Tibet. These pairings would in turn invite comparisons and contrasts between the texts, resulting in arguments which usually took the form of "In spite of these differences, we can see important similarities in these texts."

While the effort to include a wider range of texts is both necessary and overdue, it seems important to recognize that curricula that combine texts across cultures, without highlighting and problematizing the boundaries between those cultures, may end by erasing critical differences between the cultures (Willinsky, 1998). In other words, the very reason for curricula to become more inclusive--that is, to help students to recognize and learn to respect difference--is undermined by the curricular frame in which the materials are introduced. To resolve such a dilemma, a coherent curricular effort to offer both common ground and diverse voices must emphasize differences as well as similarities, contrast as well as comparison. Developing curriculum, then, would be less an occasion for rendering invisible the boundaries that separate groups than of mapping and critically examining the boundaries as they are.

 One approach to mapping existing boundaries with an eye to critically examining the extent to which a curriculum provides room for common ground and diverse voices involves the use of principled practices. The concept of principled practices (Duffy & Hoffman, 1999; Hoffman & Duffy, 2001; Smagorinsky, 2002) directs attention from the "one size fits all" or "best" practice model of, say, literacy comprehension instruction, to the study of classroom cultures that embed such instruction. Specifically, its aim is to move the conversation beyond debates about the value of instructional methods tested in lab-like experiments (Alvermann & Moore, 1991; National Reading Panel, 2000) to a dialogue about the cultural dimensions of a curriculum and the choices it offers.

Principled practices applied to curricular designs with equity of engagement as a goal might look something like this:

- Students from diverse cultural and linguistic backgrounds experience opportunities to learn in a respectful environment—one characterized by high expectations, trust, and caring teachers (Li, 2006; Nieto, 1999).

- Students' cultural identities and personal background knowledge are viewed as strengths, not deficits (Sturtevant et al., 2006).

- Teachers exercise their moral authority to search for connections between themselves and students as well as among students themselves (Valenzuela, 1999).

- Existing home/school differences become resources for curricular discussions, not barriers (Gonzalez, Moll & Amanti, 2005; Lee, 2004).

- Students' affective filters, especially those associated with their motivation to learn, are keen, and often influence directly how they perceive themselves as learners and as members of a larger, diverse academic community (Abi-Nader, 1993; Morrell & Andrade, 2006).

Curricular Content and Literacy Skills

A second important tension resonates with the first, but has a somewhat longer history and somewhat broader curricular dimensions. This is the tension between those who argue for the primacy of curricular content, specified by grade level and subject area (e.g., Ravitch & Finn, 1987; Bennett, 1993) and those who argue instead for the primacy of students' learning processes, which are less amenable to scope-and-sequence divisions (e.g., Bruner, 1996) This argument extends back almost to the beginnings of English as a school subject: one of the major arguments for the founding of the National Council of Teachers of English, in fact, was the felt need for secondary teachers to resist the universities' power to specify the literary content of the high school curriculum. In his history of the teaching of English, Applebee (1974) concludes that "English has never successfully resisted the definition of its subject as a content." And three major reform efforts in literacy teaching over the last quarter-century—the Whole Language movement, the Writing Process movement, and reader response approaches to teaching literature—all positioned themselves as opposed to those who would unilaterally specify literacy content without reference to readers and their context.

As with the first tension, curriculum and textbook developers have often attempted to resolve these differences by combining elements from both frameworks in their products. Thus secondary students might be assigned a highly specific genre in which to write (persuasion, say) with a highly specific prompt, but at the same time be asked to employ drafting strategies borrowed from writing process pedagogies such as pre-writing or peer-reviewing (e.g., Georgia Performance Standards, 2008). They might be asked to read closely a highly canonical text and later be asked how they "felt" about the characters or if the text "reminded them of anything in their own lives" (Pirie, 1997; Willinsky, 1990)

This second tension overlaps with the first because an argument *for* content always moves swiftly toward an argument *about* content, but it also extends beyond the boundaries of pedagogy and beyond the borders of literacy education. Debates within mathematics, for example (National Council of Teachers of Mathematics Standards, 2007), and social studies education (National Council of Social Studies Standards, 2007), have frequently centered on arguments about whether curricular content should be selected because it provides an occasion for learning critical skills in the discipline or whether it should be selected because of its intrinsic, disciplinary importance. Thus a small episode in U.S. History such as the early 1970's mining strike in West Virginia (Moffett, 1988) might be given short shrift in a traditional overview of 20th century history. But it might be dilated upon in an alternative kind of history where students are given opportunities to explore such issues as geographical region, working class labour, and committed religious beliefs in more finely grained detail. Curricula in any subject always represent a highly selective choice from a vast array of potentially valuable materials, and the political agendas and political agents shaping those agendas must be acknowledged in any curriculum that aims for comprehensiveness.

 The tension generated when considering how much emphasis to place on content in relation to literacy skills in curriculum development has fuelled an endless debate about the degree to which content or skills instruction will influence literacy outcomes. In an extensive review of how curricular decisions affect students' literacy engagement and academic performance, Guthrie and Wigfield (2000) concluded that various approaches, including skills, strategy, and content instruction, while important, do not have a direct impact on most student outcome measures (e.g., time spent reading independently,

achievement on standardized tests, performance assessments, and beliefs about the value of reading and writing).

Instead, the *level* of student engagement (including its sustainability over time) is the mediating factor, or avenue, through which instruction influences student outcomes. Guthrie and Wigfield's conception of the engagement model of reading calls for instruction that fosters: student motivation (including self-efficacy and goal setting); strategy use (using prior knowledge, self-monitoring for breaks in comprehension, analyzing new vocabulary); growth in conceptual knowledge (reading trade books to supplement textbook information, viewing videos, experimenting with hands-on devices); and social interaction (discussing an internet search with the teacher, text messaging a friend about a missed assignment).

Although Guthrie and Wigfield's (2000) engagement model is theoretically sound and backed by research, it does not sufficiently address the curricular demands specific to reading in the subject matter areas. Over three decades ago, Hirst (1974) advanced the notion that discrete forms of knowledge and language distinguish one discipline from another and systematically affect a person's understanding of subject matter derived from different domains. More recently, a research agenda having curricular implications that came out of the RAND Reading Study Group's (2002) deliberations emphasized that "a reader's domain knowledge interacts with the content of the text" (p. 14) and has a critical bearing—along with a text's vocabulary load, linguistic structure, and genre—on what a reader comprehends.

In a review of the research on text comprehension from a developmental learning perspective, Alexander and Jetton (2000) also pointed to the importance of domain knowledge in determining what a reader will understand. Although different subject area texts share some things in common, they also have distinguishing features that set them apart. For instance, comprehending a history textbook requires expertise in systematically locating problem/solution frames, explanations, and agents of change within a chronological lens (or a critique of that lens). Science texts, on the other hand, are typically organized around systems and subsystems. Knowledge domains are also distinguished by their lexicons, or technical vocabulary, and by their modes of inscription—the ways in which concepts and processes within a particular domain are represented in symbolic form (Jetton & Dole, 2004). Moreover, ways of reading and

writing about science, engaging in science experiments, or being recognized as a scientist are vastly different from the ways of reading a history text, writing an historical essay, or being recognized as a historian. These discourses and their corresponding differences make it imperative that a reader approach any given text by asking critical questions about whose message is being conveyed, by what means, and for what purposes.

Easing the tension inherent in curricular models that emphasize content over literacy skills (process) or skills over content is possible. The following tenets, developed by Herber in 1970 and refined eight years later, require viewing curriculum as context, content as vehicle, and literacy skills as the processes by which one learns the content. With this in mind, consider how:

- Content determines process. That is, implicit within the content of subject matter texts are the reading processes (or skills) students need to comprehend the material.

- There need not be a dichotomy between the content of a subject and the skills for learning the content. As noted earlier, skills are the means by which students comprehend the content of the curriculum, although not singularly nor in isolation from a reader's background knowledge and any number of other factors.

- Curricular decisions that lead to pull-out programs (e.g., teaching literacy skills separate from the context and content in which they are needed) confound efforts to develop students' independence in reading and responding to texts (Herber, 1978, pp. 4-5).

Learning Processes and Assessment Technologies

A conventional but still useful way of conceptualizing curricula in its various iterations is to think of curricula as 1) planned or written, 2) as taught or enacted, and 3) as assessed, either formally or informally. Framed in this way, we can see how curricular intentions are transformed as they move across the contexts in which they are worked upon and by the agents (politicians and policy makers, teachers and students, assessment agencies and psychometric consultants) who do the working.

In an increasingly familiar and highly political process, curricula are generated in a three-stage manner that reflects the three-part conceptual frame just described. First, curricular standards for grade levels and subject areas are developed by agencies at the state or national level (e.g., Hargreaves, 2003; Hillocks, 2002). These usually state as bulleted items of varying length the goals to be achieved by students within the subject area at a particular grade level and usually include both the skills to be mastered and the content to be covered (e.g., Georgia Performance Standards, 2008).

In a second, sometimes overlapping phase, teaching materials, textbooks, and pedagogical protocols are developed that purport to reflect the standards and that promise to help teachers "teach" the standards if followed as intended. Because some of the central goals of a literacy curriculum at any grade level ('mastery' of standard English, competence in persuasive writing, comprehension of canonical texts) are not only lofty but ill-defined, the match between those goals and the specific teaching strategies embedded in pedagogical materials and textbooks is often hard to track. Once a set of standards is produced, however, there is usually enormous political pressure— and enormous commercial pressure—to produce swiftly a set of materials that will "teach" to those standards. But textbook companies, freighted by immense investments in earlier products, are seldom able to produce entirely new approaches to teaching on short notice (Apple, 2001). Thus the 'new' teaching approaches on offer are more cosmetic than substantive, employing the vocabulary of the state mandated standards as a frame for teaching the same content and skills. And, of course, even if the teaching materials and textbooks successfully offered thoughtful and practical implementation strategies to teachers, the teachers themselves would need to interpret and apply those strategies based on their own students' strengths and their own teaching expertise.

Perhaps the most critical phase in the lives of curricula, though—certainly the phase where the stakes are the highest—is the point where curricular standards as devised and taught become the basis for the assessment of student performance. Here too, attention must be paid to the match between the standards that have been generated and to the practical instruments that will measure students' competency on those standards. But attention must also be paid to the match between those practical assessment instruments and the teaching strategies teachers chose or were able to employ with the students in their care.

To claim that mandated assessments are measuring student progress on mandated standards begs three related questions:

- What is the evidence that teachers have had the resources, the skills, and the opportunities to teach the standards across a wide range of socioeconomic and cultural contexts to a wide range of students?

- What is the evidence that the assessments employed reliably measure what is most important in the standards in ways that reflect the complexity of the learning goals specified in the standards?

- What is the evidence that the very process of mandating high-stakes assessment changes the nature of teaching and learning in ways that have not been anticipated and in ways that do not square with some of our deepest commitments to public schooling (e.g., Nichols & Berliner, 2007).

One of those commitments is to increase the chances that large-scale reform efforts will contribute in a positive manner to how young people perceive themselves as readers and writers—even to how they use literacy to mediate their identities in a school curriculum, a neighborhood, or a larger community in which they live. The importance of attending to students' perceptions of themselves as readers and writers in an era of externally-mandated reforms and high-stake tests is paramount and not to be taken lightly. For as Holland, Lachicotte, Skinner, and Cain (1998) remind us, "People tell others who they are, but even more important, they tell themselves and then try to act as though they are who they say they are" (p. 3).

We find this conception of identity a useful one, especially when one's goal is to conceptualize a curriculum that seeks equity of engagement in common ground and diverse cultural conversations. We also find it conducive to exploring the following set of literacy related questions—the answers to which may suggest a need for monitoring and adjusting whatever curricular tensions exist between students' learning processes and an all too- pervasive assessment environment.

- Are young people's perceptions of themselves as readers and writers inextricably tied to their teachers' perceptions of how they have fared in today's high-stakes testing arena?

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- Do students value reading against the grain—sometimes described as reading the subtexts or "hidden" messages of texts that authors may have consciously or unconsciously concealed?

- More to the point, have they been taught to read in this manner, and if so, do they recognize that texts of all kinds (print, visual, aural, digital) position them in ways that produce certain meanings and literate identities from the cultural and material resources available within specific social situations? (Ladson-Billings, 2006; Morgan, 1997).

Young peoples' interests in the internet and other interactive communication technologies suggest the need for a curriculum that emphasizes reading with a critical eye toward how writers, illustrators, and the like represent people and their ideas—in short, how individuals who create texts make those texts work. All texts, including academic textbooks, routinely promote or silence particular views.

But concerns about young people's literate identities vis-à-vis curricular reform efforts and the distribution of cultural and material resources are only a few of the tensions that continue to coexist in uneasy balances and alliances (Luke, 1989) in a high-stakes assessment climate. As the push to increase young people's literacy achievement continues to mount, it is important to not lose sight of students who struggle to keep up with, or even fail to meet, the increased expectations of a school's curriculum. These are the same students who for different reasons often experience difficulty in reading and writing about a wide range of materials their teachers assign in the various subject areas.

Attempting to define the term *struggling reader* is like trying to nail Jell-O to a wall. The term takes on different characteristics depending on who is defining it and for what purpose. In the professional literature, as well, there is little agreement on what constitutes a struggling reader. A cursory analysis of several recent issues of mainstream literacy journals published by the International Reading Association reveals that the term *struggling* can refer to youth with clinically diagnosed reading disabilities as well as to those who are unmotivated, disenchanted, or generally unsuccessful in school literacy tasks. A smorgasbord of descriptors, these labels tell little or nothing about the cultural construction of even a single struggling reader. They do, however, provide ways of thinking about culture and struggling that are seldom addressed in the

literature on teaching young people who, for whatever reason, are thought to be achieving below their "full potential" as readers.

Some Parting Thoughts

The conceptual binaries we have used here to frame our argument cannot be usefully seen as independent, separate problems to be somehow "solved" in efforts to develop curricula. Rather, when taken together, those binaries map the discursive space within which competing curricular models can be located. When a particular curricular model takes a position about one term in a binary (arguing for subject matter content, say, over the teaching of critical skills), it necessarily invites dissenting response from the opposing term. The binaries cannot be resolved, the conversation cannot be concluded, because conversations about the binaries themselves constitute the dialectic, ongoing, and always politically framed discourse about public education. Any specific curriculum, then, especially one with literacy in the middle years as a pivotal point, must acknowledge these binaries while at the same time recognizing itself as a viable means of critically examining the nature of the political and economic tensions they represent.

Just as the discontinuities expressed in the three binaries that frame this paper call for discussion when developing a curriculum that seeks equity of engagement, so too is there a need for rethinking the teaching of youth whose motivations to read and write hinge on a range of factors that include but are not limited to social, cultural, and political influences. To participate fully in curricular discussions of these influences, we perceive a need for judiciously discarding some of the rhetoric surrounding literacy teaching and learning in the middle years—rhetoric that would claim (or wish) to be above interrogation, yet is firmly ensconced in the binaries we propose to keep, if for no other reason than to engage with the challenges they present.

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AN APPROACH TO SECONDARY SCHOOL IMPROVEMENT

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Abstract

This paper sets out in brief an approach to improving student outcomes from secondary school, in particular higher graduation rates. Five areas requiring simultaneous attention are outlined that underlie such improvement and some of the main implementation challenges are discussed.

Introduction: le problématique:

In a 2005 the World Bank reported the central dilemmas that face secondary education around the globe. Secondary schools, the World Bank claimed, are trying at one and the same time to be "terminal and preparatory, compulsory and post-compulsory, uniform and diverse, meritocratic and compensatory, …serving both individual needs… and societal and labor market needs, … offsetting disadvantages but also, within the same institution, selecting and screening students…, [and]… offering a common curriculum for all students and a specialized curriculum for some" (p. 14). The report includes an apt and powerful quote from Aristotle's *Politics* (p. 76) showing that this diversity is longstanding in roles and expectations, but as completion of secondary education has become the minimum expectation for virtually all students, the contradictions have become more prominent and more difficult to manage.

The World Bank report also stressed the extraordinary homogeneity in secondary schooling around the globe, and the equally extraordinary stability in basic areas such as curriculum and school organization. Secondary schools everywhere tend to be organized in similar ways and to have similar curricula. There is a view among education change experts that hard as it is to create lasting change in elementary schools, and that it is much more difficult to do so in secondary schools (Fullan, 2006; Hargreaves and Goodson, 2006). Some of the reasons for this are discussed towards the end of this paper. Public confidence in secondary schools, the sine qua non for the

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system's progress, also tends to be lower than for elementary schools. Yet countries around the world are making efforts to increase quality and also increase equity of outcomes in their secondary education systems. This paper puts forward a direction for achieving those dual purposes.

The approach developed in this paper is derived from several sources. The extensive literature on educational change generally and in secondary schools in particular provides a considerable amount of guidance, much of which is counterintuitive (although in the interests of readability, the paper is not heavily referenced). Other important elements are derived from my experience over more than 30 years, in government and academia, to create and understand change in secondary schools. Much of the thinking in this paper comes from the efforts since 2004 in Ontario, Canada, to increase high school graduation rates significantly and the ensuing reflections of the author, as the chief civil servant responsible for this effort, as to the implications of these efforts for our overall understanding of secondary school improvement (Levin, in press). Not everything in this paper has been done in Ontario, but the Ontario reforms are consistent with the general thinking outlined here.

This paper takes the position that reform should aim at improvement across the broad range of student outcomes that matter to them and to the public and that it should aim at reducing inequities in outcomes among groups of students. Sustainable reform should also be motivating and positive for educators as well as for students and parents. Sustainable reform also focuses on increased public confidence in the public schools.

The requirements for secondary school improvement

A program of change for secondary schools that is intended to deliver real and sustained improvement must: a) attend simultaneously to five areas of effort; b) pay careful attention to implementation, not just policy and design, and c) take into account and manage effectively the main barriers to progress.

The five interactive and mutually supportive areas of attention for improving secondary school outcomes proposed here are:

1. A focus in every school on student success, encompassing the creation of an environment which is safe, in which every student has a sense of belonging and of adult care, and where diverse student identities are affirmed.

2. A focus on improvements in daily teaching and learning practices across all classrooms and teachers, including improvements in student assessment policy and active engagement of students in their own learning.

3. Appropriate programs and pathways, including less specialization in curricula, and varied pathways insofar as all of them provide real opportunities for meaningful employment and further education.

4. Connection of the school to the worlds of citizenship and work, including effective bridges and transitions to post-secondary education, employment, volunteer work, and the development of essential life skills beyond the standard high school curriculum.

5. Community engagement that brings parents into the educational process and engages the broader community in supporting students learning and welfare.

Paying careful attention to implementation requires the creation of focus in every school through effective leadership, strong teamwork, capacity-building for staff, and effective use of data. Reform initiatives need also to be aligned (across levels), coherent, respectful of all parties and evidence-informed.

The main barriers to secondary school change can be understood in terms of the following issues:

- the dominance of post-secondary admission requirements in shaping secondary school programs and structures;

- the organization of secondary schools (curriculum, staffing, timetabling, credits) around subjects and disciplines, which in turn leads to:

- the never-ending demand to include more specific content elements, which leads to:

- fragmentation of student experience and neglect of overarching educational goals and skills such as problem-solving, research, application, citizenship, and knowledge integration.

For the purposes of this paper, each of the five areas of attention for secondary school improvement are discussed only very briefly.

1. A focus in every school on student success.

A large amount of research shows that students' sense of connection to the school is a prime factor in their persistence. Over and over again students who drop out report feeling that nobody cared or made any attempt to keep them in school; indeed, often they felt encouraged to leave. Similarly, the literature on resilience (e.g., as discussed in Levin, 2004) shows how powerfully students can be affected by even a single adult who they see as believing in and supporting them. No amount of change in curriculum or policy will compensate for school environments that students, especially those with the greatest challenges, find alienating and unsupportive. As noted later in the discussion of standards, care is not understood to mean the acceptance of poor quality work or inappropriate behaviour in the school community; tolerating those would in fact indicate an absence of real concern.

There are several elements to creating a caring environment in secondary schools. Although policy measures such as small schools, house systems, or teacher-advisor systems may help support a successful approach, the primary required change is cultural and attitudinal so will not be created by mandating particular structures. Instead, there must be a deliberate focus in the entire school, involving professional and support staff as well as students and parents, that practices and communicates a genuine interest in, understanding of, and respect for the situation and needs of every student. The central task is to make each secondary school a place that believes that its mission is success for students rather than seeing high failure or dropout rates as an indicator of 'standards' and quality. Clear goals and a school leadership team committed to their achievement are essential.

This task is rendered more difficult because the student population in most countries is becoming more diverse demographically while students are also living in a world of popular culture and technology that is more removed from the school than at any time in at least the last forty years.

A range of specific practices can help create a caring and supportive environment, including greater cultural awareness among staff of the real lives of students, outreach to minority student groups, advising and mentoring systems, and various approaches to early intervention and support for students experiencing difficulty. One example would be the creation in Ontario of the new role of the 'student success teacher' with specific responsibility for knowing, supporting, advocating for and otherwise assisting students

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who are having problems. As already mentioned, the specific practices matter less than the overall atmosphere created. In that regard, it is important to have clear goals, effective leadership, and a team orientation that creates and supports the necessary practices.

2. A focus on improvements in daily teaching and learning practices.

While many secondary teachers are exemplary, professional and doing outstanding work, surveys of students in secondary schools still report significant levels of disengagement and boredom (Cullingford, 1991; Yazzie-Mintz, 2006).   In PISA 2003, an average of 32% of students across countries (23% in Australia) "consider that school has done little to prepare them for life" (OECD, 2004, p 125).   The traditionalist response to this analysis is to say that school is not about fun or enjoyment, so whether students are interested is largely irrelevant. However student engagement is clearly linked to better outcomes, and is also highly contextual; even highly disengaged students will identify particular classes or teachers where they experience a much greater degree of interest and success.

Elementary schools and teachers have had quite a bit of attention and professional development on pedagogical approaches such as differentiated instruction and co-operative learning. Most of the variation in student achievement in Australia is within schools (OECD, 2003). Still, much less appears to have been done in secondary schools around how to create engaging, stimulating and intellectually challenging classes, especially for students with the most challenging backgrounds or who achieve less school-based success. There is evidence (e.g. Grubb, in press; Ladwig et al., 2007) that students in less challenging tracks or streams tend to get less interesting or varied instruction, a situation entirely consistent with the finding in PISA that countries with more tracking and streaming have poorer performance (OECD, 2004).

Improving instruction is more difficult in secondary schools because teachers are all specialists and, at least to some extent, each subject will require its own approach to effective instruction. However there are areas of commonality, two of which – student engagement and student assessment – are particularly important. At least some of the practices of effective student engagement, such as choice in work and assignments, clear understandings of purposes and desired outcomes for learning, or connecting work

to students' out-of-school experiences and interests are relevant across subject boundaries.

Assessment is a critical area of instructional policy and practice. As noted later, high school change must always be about developing real skills at the highest possible level. A growing literature on effective assessment practices shows that steps such as ensuring that assessments are fair measures of key goals, ensuring that students understand the criteria for quality work, and regularly giving substantive feedback without grades (Assessment Reform Group, 1999) can also improve student engagement and performance. Effective assessment is clearly linked to real performance (rather than narrow measures of recall), meaningful curricula, and skills that go beyond any single subject area. Schools can also learn much from careful analysis of their current data on student performance if they can learn to, for example, compare student performance across subject areas.

Where they exist already, large-scale assessments, such as state or national exit examinations, can be an appropriate part of a high standards secondary school system, particularly because they are highly popular with the public and so can contribute to public confidence. However there are dangers associated with large-scale assessment as well, especially where it is the main determinant for entry to post-secondary education. These problems include high levels of anxiety among students, narrowing of curriculum and teaching, and an increased rather than reduced focus on university admission as the only outcome of secondary school that really counts. Countries where this is the case, such as Japan or Korea or France or England, have all been struggling with ways to soften these impacts.

Much remains to be learned about how we might best work to improve instructional practice and student engagement in secondary classrooms, but this remains a vital area for any real effort to improve student outcomes.

3. Appropriate programs and pathways.

An important starting point for any discussion of curriculum and pathways is that students at 16 and 17 do not know where their lives will take them, and adult confidence that we can predict individual student outcomes is not supported by the evidence. Aggregate predictions of student outcomes – for example the proportion of a cohort that will go on to post-secondary education or directly to work – are generally quite

accurate, but individual predictions are not (Gleason & Dynarski, 2002). Given the diversity in students' life paths, it is not possible to have a secondary education that is appropriate to all the different choices students might make. Increased specialization in secondary school curriculum is also counterproductive.

The default position in many school systems has been to see preparation for university as the best and most flexible option despite abundant evidence that this option does not work for many students while they are in school, and that university is not the immediate destination for majority of students. Yet other pathways, such as vocational education, have suffered from low public and student regard (a situation that seems unlikely to change any time soon) and – perhaps because students are streamed into them - do not necessarily show positive outcomes in terms of employment or earnings. The desire of other sectors, such as technical training institutions or apprenticeships, to be able to attract competent students has led to increasing their own entrance requirements even where (as is also the case for universities) the requirements cannot be demonstrated to be strongly related to later performance.

Pathways are only justifiable if they lead to real opportunities for meaningful and decently-paid employment, or to broadly-accepted labour market qualifications, or to tertiary study, or – even better – to more than one of these. Given an assumption of many changes in plan for most young people, this principle would suggest that:

- movement across pathways should be supported, whether in secondary schools or after, as young people make the inevitable adjustments to changes in their life circumstances and plans;

- a strong focus in curriculum and outcomes on generic skills that apply across pathways (and are relevant to students with diverse backgrounds and interests) is desirable, as it reinforces similarities rather than stressing differences in content;

A further concern is excessive curriculum specialization in secondary schools, most of which results from the focus on university preparation as well as the specialized training and subject organization of teachers and courses. Only a small minority of students benefit from highly specialized secondary school curricula. The best example is mathematics, where most countries are trying to have students take increasingly advanced maths in secondary schools despite the fact that only a very small percentage

of these students, let alone of the larger labour force, ever uses these skills, while maths skills with much broader applicability and utility both to employment and everyday life are neither taught nor learned by most students. There is relentless pressure in secondary schools to increase the number of courses and hence degree of specialization, a pressure that produces undesirable results in just about every possible respect and should therefore be strongly resisted.

One further way to address pathway and curricular issues as well as engagement is by providing more opportunities for students to undertake self-directed learning. Given the importance of independent learning in the current and future labour market, requiring all secondary students to complete a meaningful piece of self-directed learning seems highly appropriate while also creating greater flexibility in curriculum and more possible pathways.

Some further implications for pathways are also outlined in the next section.

4. Connection of the school to the worlds of citizenship and work.

The disconnection between secondary education and students' post or out of school worlds has been recognized for a very long time (e.g. Coleman, 1961). For example, although preparation for work remains an important stated goal of schools, they have tended to see students' out of school employment as a problem that interferes with academic performance instead of an opportunity to support learning about work and the labour market.

Similarly, active citizenship and political engagement is a stated goal of secondary schools but in practice most secondary schools are institutions in which students have fewer rights and freedoms than they have when they leave the school building.

Both these areas are also connected to academic achievement, since students will perform better where they see the institution as taking more account of their interests and realities. Connections to citizenship and work can reinforce engagement, which in turn can reinforce academic achievement.

A real secondary school reform program, then, must give real attention to building meaningful connections with employment, including students' part time and summer employment, and to creating opportunities for meaningful civil and political participation in the school as well as in the broader community. To do so would require

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substantial change in many aspects of school culture and organization. However there are some feasible steps that could lead in the right direction.

One example would be the use of portfolios that would both allow and require students to demonstrate a range of broad skills, such as teamwork or problem solving, across their high school experience and independent of any particular course. Such portfolios would be useful to students in seeking employment and possibly in entry to post-secondary education, but would also push schools to think about how they recognized and provided these important, broad learning opportunities. The enormous energy and commitment that many students show for extra-curricular activities in areas such as the arts, sport, or volunteerism could also be recognized in this way.

A second example would be around civic engagement. Unless schools set out to promote engagement actively, in classrooms and in the school as well as in the broader community, ideas of participation will remain entirely abstract to students, if not the subject of cynicism. Active measures are required to give students more voice in what happens in their classrooms and schools. Many examples exist, including pupil surveys in Victoria, and the 'Tell Them From Me' program developed at The University of New Brunswick.

A third example is related to pathways to work and involves building bridges that allow students to work at more than one level simultaneously. For example, models that encourage students to undertake advanced technical training while still in high school, or that connect study to simultaneous meaningful employment could be expanded and encouraged. Models such as career academies or dual credit systems or early college systems (e.g. Hoffman et al., 2007), or Ontario's new high skills majors all provide students with opportunities to explore their interests in more depth and to make more rapid progress when they have a defined area of interest.

5. Engagement of parents and the community in supporting students learning and welfare.

In every school system, student outcomes continue to be linked more strongly to socio-economic status than to any other single factor. Schools cannot be successful unless they are strongly linked to the families and communities in which students live. Yet parent and community liaison is usually an afterthought, done when someone has leftover time, energy or money.

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There are two main respects in which these connections are important. First, parents and families remain the third side of the triangle of student success (Coleman & Collinge, 1998; Desforges, 2003). Schools and parents need to work together to support students' engagement and success. This requires active measures by schools to reach out to parents, especially parents who are considered 'hard to reach' due to such barriers as language, poor experiences with their own schooling, or problems and challenges in their own lives such as poverty or physical or mental health problems. Creating these linkages requires dedicated resources in schools for whom this is a primary responsibility. It cannot just be loaded on to teachers, although teachers must play an important role as well. Moreover, engagement is a two-say proposition; parents have to be heard with attention as well as spoken to about their responsibilities.

Second, especially for many students with the greatest risks, the community provides avenues for outreach and engagement through vehicles such as youth agencies, ethnic organizations, religious institutions, or sports or arts groups. Engagement with these local resources can help schools deepen their understanding of students' worlds as well as sometimes finding new ways to reach students. Finally, local communities can offer resources such as mentors and employment opportunities that can help reinforce for students the value of secondary education in terms of achieving their life goals.

A note on standards

One of the main criticisms of many proposals to reform secondary education is that these proposals will 'lower standards' and reward students for doing poor work. A further danger is that increased student success will be taken as a prima facie indicator of falling standards – that is, if more students are graduating, that must mean it's 'easier'. The standards argument has high public resonance so must be taken very seriously. It cannot be defused solely by arguing that there are multiple standards for different kinds of work and interests, since there is wide recognition that not all of these multiple standards lead to good outcomes for students. Rather, all secondary school reform must expressly commit to the achievement of high standards for all students in a range of activities all of which can be shown to lead to positive outcomes. Further, there will be some basic areas in which all students must be competent, primarily in regard to written and oral communication as well as the broader skills of teamwork and

problem-solving. Students want an education that stretches and challenges them, provided that it does so in ways they perceive as relevant to their lives and goals.

A note on equity

Much of the focus of this paper is on strategies that can be used in all schools, though always with local flexibility. These strategies, evidence suggests, will improve overall outcomes including those for students with greater challenges. An across-the-board approach, however, will not be sufficient to make significant reductions in the inequities in outcomes among various ethnic and socio-economic groups. Accordingly, generic improvement strategies must be combined with targeted efforts to reduce disparities. These require not so much entirely different approaches, but intensification and customization of the approaches already described. For example, parent and community outreach is both more important and more difficult in high poverty communities or with recent immigrants. As another instance, as noted earlier, students with poor skills may get less interesting and challenging instruction, so the task of addressing instructional quality in high need programs or schools – including attracting and retaining highly skilled teachers and principals – requires explicit attention, probably in different ways. The key point is to retain an explicit focus, including the collection of data, on reducing inequities in outcomes for all groups.

Implementation

Governments often make the mistake of thinking that declaring a purpose, promulgating some new policies, providing some project funding, and providing a few days of training to teachers and principals is sufficient to create lasting change. Much experience and research shows that this is not the case. If the goal is to create sustained improvement in hundreds of schools and thousands of classrooms then the implementation effort has to be carefully designed and of a significant order of magnitude at several levels. Schools need to have some resources to support improvement, of course, and so do intermediate bodies such as districts. But money is not generally the primary concern. Human capacity to understand and promote innovation is in shorter supply than cash. Very few ministries of education have the capacity to support real change in school practices, being typically focused on rules, funding and issue management. Jurisdictions that have experienced success have set up

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special purpose infrastructures to support key initiatives while also connecting these carefully both to other parts of government and to the broader education sector.

Several other important elements of implementation can be briefly mentioned. One is coherence. A main challenge to many reforms is that schools feel beleaguered by a large number of one-off initiatives that do not seem to connect with or reinforce each other, so it is important to avoid too many separate strands of reform. Having the appropriate data to judge current status and improvement, and making it available to people in usable ways is another important implementation requirement. So is the presence of sufficient effective leadership with commitments to clear, public goals at all levels of the system.

Finally, careful communications is required to maintain stakeholder and public support for reforms. Educators often assume that the virtues of improvement are self-evident, but in reality they require constant, intensive and open dialogue with all the parties to ensure that they are not derailed by other issues or interests. The importance of maintaining public confidence in standards of secondary education has already been mentioned. Both the political level and civil service have to be involved in the communications work in a coordinated way for it to be successful.

In short, successful implementation requires attention, resources, and skilled management without which any reform program, no matter how well designed or thoughtful, is likely to founder.

Conclusion

It is possible to improve student outcomes in secondary schools. We know quite a bit about what is required in order to have more students reach higher levels of skills and knowledge, leading to better career and life outcomes. This paper outlines a strategy that is well grounded in evidence, and achievable in a thoughtful, determined jurisdiction.

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THE SYLLABUS: POLICY INSTRUMENT AND PRACTICAL CURRICULUM GUIDE

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Purpose of the Report

Our purpose is to report on the nature and function of syllabus documents in government departments of education.

The Context for This Report

The meaning of the term curriculum varies among jurisdictions and often changes over time within jurisdictions.   Over the last two decades, many Western countries have developed and/or expanded their use of syllabus documents as a policy vehicle (Westbury, 2008).   But in the United States, England and other places, governments have shifted their emphasis from the use of syllabus documents as educational policy instruments to the use of achievement measures (Floden, 2004).   Various mixes of these policy instruments occur as they do, for example, in the Ontario system which maintains a comprehensive (by grade & subject) set of syllabus documents while conducting annual student achievement surveys through its Education Quality and Accountability Office, and a requirement that students pass a literacy test. In the short term newly elected governments in democratic systems influence the nature and function of syllabus documents. Over the past two decades Ontario, for example, has had a series of governments with quite different political characteristics and these have influenced education policy, the place of curriculum in it, and the nature of syllabus documents.

Given this ever-changing global and local context, (Anderson-Levitt, 2008) this report, while building primarily on the Ontario experience, is not descriptive of the status quo in Ontario. Rather, we draw on various features that have, at one time or another, been

prominent in Ontario, and elsewhere, and which, in the overall scheme of things, are important to take into account by those concerned with government syllabus documents.

What is Curriculum?

In the popular mind, curriculum is a relatively simple term referring to what is taught. The course of studies, perhaps a textbook, is often thought of as the curriculum. But the term is much contended in the professional and academic literature (Jackson, 1992). In practical and political terms curriculum is difficult to untangle from education more generally. Virtually all public and political debates over education and its policies ultimately become curricular (Connelly, He, Phillion & Schlein, 2008). It is for this reason that the policy instrument, the syllabus, can be labelled as such. Syllabus documents clearly are not curriculum in the sense of what is taught. Syllabi are not courses of study. But they are called curriculum because they are part of a wider system of policy and practical curriculum platform questions.

Curriculum is embedded in, and part of, public educational discussion and is, as well, the concrete content and set of exchanges that occur between student and teacher. Curriculum is part of the web of things that define education. Moreover as Goodlad (1979) noted, curriculum is made in different places in the system: in schools, in boards of education, and in government departments of education. To this we add that curriculum is made in public discourse and political party platforms. (See Figure 1) It is necessary, in any discussion of curriculum, to sort out the locus of the discussion in this network of curriculum considerations. For this report our locus is on government syllabus documents. But to make sense of the meaning and function of syllabus documents produced by governments requires consideration of the broader curriculum system.

Figure 1

Curriculum Deliberation and Curriculum Making

Who Decides What is Taught?	**Public Discourse and Public Institutions**
	Political Party Platforms
	Government Departments of Education
Who Decides How it is Taught?	**Board of Education Program Offfices**
	Schools

Who Develops Support Documents?
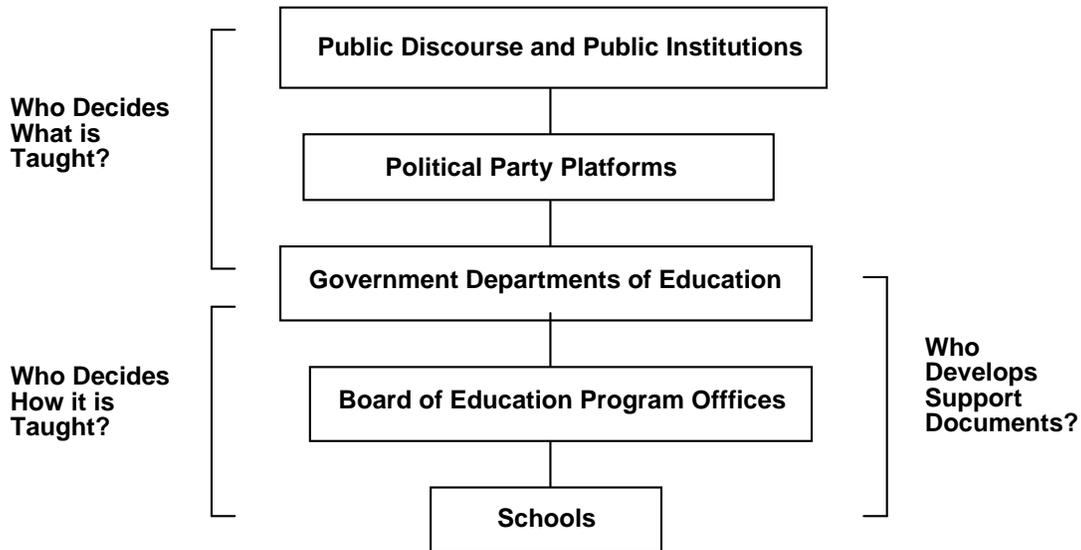
What are the functions of syllabus documents in the broader curriculum system?

There are two functions of syllabus documents, (1) the *policy instrument function* and (2) the *practical guideline function*. Syllabus documents stand between public curriculum debate and political party platforms, *and* the practice of curriculum delivery in schools, and elsewhere. Syllabus documents are a pivot point that mediates practice and political platforms with public dialogue.

For the *policy instrument function*, syllabus documents are one of the main ways by which governments respond to public dialogue, by which they offer evidence of the delivery of political platforms, and by which they answer emerging public critique (Figure 2). In some jurisdictions syllabus documents may even be called policies depending on how the syllabus is constituted in law.

Westbury (2008) shows how syllabus documents play an important role in the narrative by which political parties, and to an extent professional associations, answer their public critics. Literacy and numeracy are part of the public agenda in every jurisdiction.

Political parties, and professionals, justify policies and actions on these matters by what is contained in syllabus documents.

Figure 2

Functions of Curriculum Guidelines

Policy Instrument Function

Public Educational Dialogue

Political Party Educational Platform

Curriculum Guidelines

Functional Pivot Point

Curriculum in Schools and Elsewhere

Practical Guidelines Function
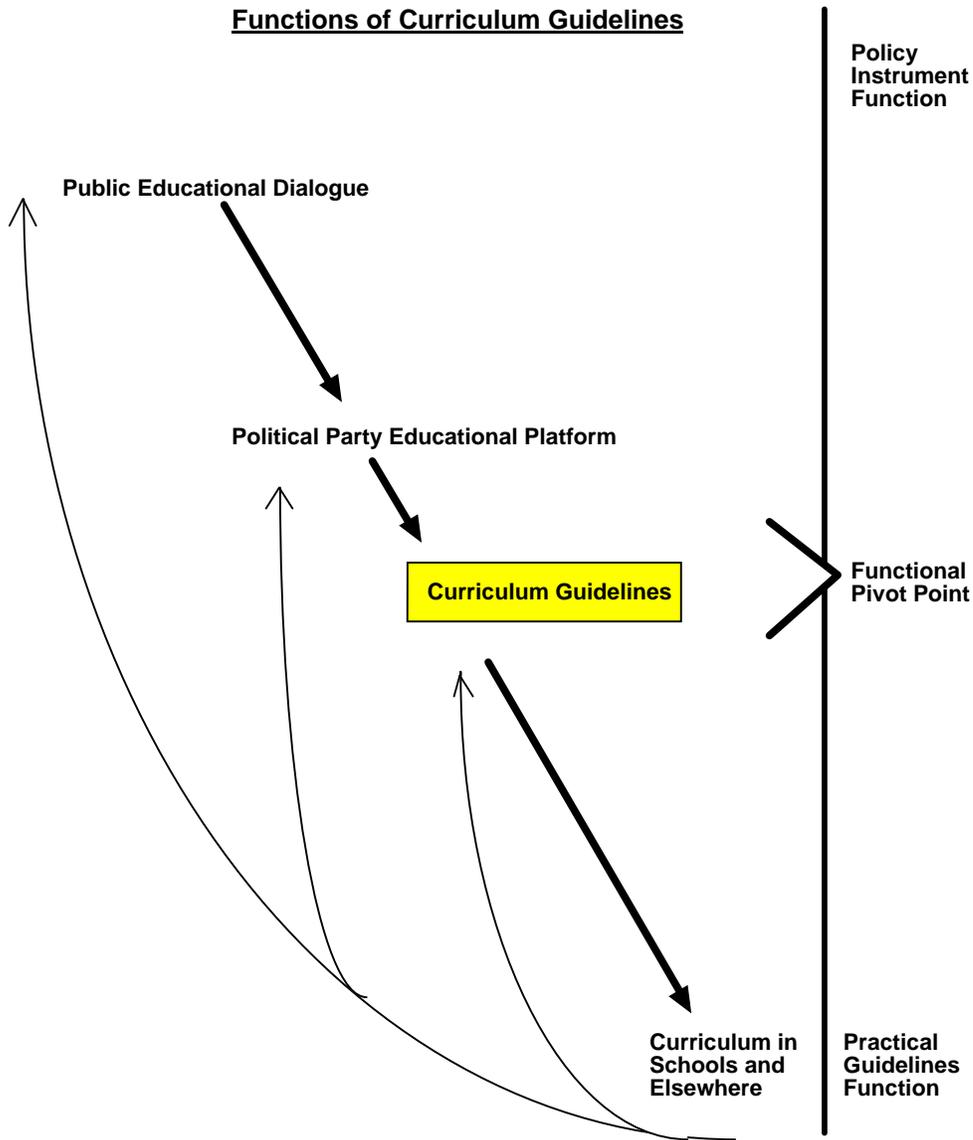
The counterbalancing function of syllabus documents as pivot points between politics and practice is their role as practical guidelines for what is taught in schools and elsewhere. We call this counterbalancing function of syllabus documents *the practical guideline function*. For many, perhaps most, this is the only function imagined for syllabus documents. When syllabus documents are viewed as expectations about what should be taught, questions of implementation become pre-eminent (Fullan, 2008). The idea of syllabus documents as practical guides, when torn away from their function

as policy instruments, leads to the collapsing of syllabus documents into mere practical curriculum documents. Thus, syllabus documents may become textbook-like in character and, when complemented by teaching guides, may become a teacher-proof formula for the execution of curriculum in schools and elsewhere. Following this direction of thought, syllabus documents may even be replaced by approved, mandatory, texts for particular subjects and courses of study.

When, however, syllabus documents are seen as the fulcrum of two overriding functions, *the policy instrument function* <u>and</u> *the practical guideline function*, then the syllabus takes on a more tentative, politically and publicly sensitive, quality in which it is understood that it is general principles rather than detail that is primarily at stake. It is furthermore understood that syllabus documents will inevitably be revised when newly elected political parties attain power, and when shifting public interest, along with data on practice and achievements, warrants.

Syllabus documents – Detailed Functions

The two pivotal functions of policy instrument and practical guideline convey a set of specific syllabus functions. We describe this detail in the spirit of the Aristotelian golden mean, 'not too much of this' and 'not too much of that'. In practice these functions vary from subject to subject and from topic to topic, from time to time, and from government to government.

Policy Instrument Function

- Syllabus documents are vehicles to implement public educational change.

- Taken as a whole, syllabus documents reflect the political allocation and distribution of knowledge in society. Social/political attitudes towards social elites, social equity, economic ambitions and the like are reflected in the content, and balance, among syllabus documents.

- In complex curriculum settings, such as Ontario, with policy instrument and practical guidelines functions; with standards related to, and sometimes in competition with, syllabus documents; and where there is a tapestry of curriculum development ranging from commercial publishers, school boards with expansive curriculum functions, and highly professional teacher

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associations with teacher standards, professional development and resources, the syllabus functions as a locus around which this curricular web operates. Everything comes back to syllabus documents.

- In tension with this focal role of the syllabus in the curriculum web is the fact that none of the links between any element in the web and the syllabus are firm nor fixed. Linkages between syllabus documents and other matters such as standards depend on the expertise, beliefs and values of specific individuals making the link; and they depend on local norms, values and politics which, in some jurisdictions vary from place to place and from community to community. It is not possible, nor desirable, to attempt to put in place mechanisms to reduce this natural system of flexibility between syllabus documents and the curricular system.

- Syllabus documents become the targets, and outcome, of special interest advocacy groups.

- Syllabus documents are policy instruments for the ideological steering of school systems.

- Syllabus documents have narrative functions as elected politicians and political parties point to syllabus documents as representing their ideology, for example, statements in the syllabus on equity.

- Syllabus documents have narrative functions as governments point to them, and the flurry of development activity that goes into their making, and re-making, as evidence of government action on political promises made.

Practical Guideline Function

- Syllabus documents, taken as a whole, foster continuity throughout, and across, the curriculum.

- Syllabus documents foster grade-to-grade and division-to-division transitions.

- Syllabus documents encourage teacher professionalism. This emerges from the flexibility teachers have to interpret syllabus documents, and to utilize special classroom resources appropriate to local situations and particular student needs.

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- Syllabus documents may specify student expectations and contribute to students' realizing their potential.

- Standards, student expectations and syllabus documents combine to create a system in which the government may claim competitive advantage with other governments. Government competition and ranking is often used to justify particular syllabus documents.

- The idea of standards associated with syllabus documents allows for the development of assessment standards (content standards) and benchmarks for instruction and evaluation, thereby publicly relating government intentions to expectations.

- Syllabus documents are central reference documents for approved curriculum material and textbook lists, for the development of assessment standards and strategies, preservice teacher education programs, and inservice professional development programs.

- Syllabus documents inform the delivery of educational services in classrooms. For teachers, syllabus documents provide a framework of what is to be done from among the infinite range of possibilities.

- Syllabus documents, in their development and implementation, have a community building function. All those with science expertise or interest may, for instance, orient themselves politically, possibly in working teams, around the development, and interpretation, of a science syllabus.

- In jurisdictions, such as Ontario, syllabus documents have an administrative agenda setting function (Pierre, 2000). School board administrators, committees and board groups orient themselves around particular syllabus documents to develop local board guidelines and classroom curricula.

Selected Issues In the Development and Use of Syllabus

Level of Detailed Specification

In principle, syllabus documents may range from relatively teacher-proof lesson-by-lesson plans of study to broad philosophical goal statements with minimum content specification. In democratic systems, certainly in Ontario, balance has been established

over time under the influence of stakeholders representing both *the policy instrument function* <u>and</u> *the practical guideline function*.

Governments may aim for a certain level of specification given historical precedent. But an open democratic process leads to variability in level of specification from syllabus to syllabus. Efforts to maintain consistency across syllabus documents need to be balanced with democratic sensitivity.

Autonomy of the Ministry of Education Civil Service

Government systems vary in the degree of autonomy assigned to education civil servants responsible for syllabus development. With high levels of autonomy some syllabus development may be more academic and professional in character and planning teams may be relatively small in size. Well established academic and professional curriculum development models are found in standard curriculum textbooks, the most well known and still used being the "Tyler Rationale" (Tyler, 1949). The more open democratic model and process seen in Figure 2, the frame used in Ontario, means that the syllabus development process becomes *less* traditionally academic and professional. A much broader array of public and political concerns informs the process. Ongoing collaboration, tension, and tradeoffs between political/public and professional/academic concerns occur. Moreover the planning process becomes a representative one with a wide array of stakeholders beyond the more traditional academic professional membership. Draft versions of syllabus documents are circulated not only to professionals and academics but to representative public/political organizations for feedback. In Ontario with a history of both a *policy instrument function* <u>and</u> a *practical guideline function* there is minimal professional and academic tension with public political concerns. But, in jurisdictions where this process is relatively new, government efforts need to be made to explain and rationalize the process to all stakeholders.

Factors affecting the success of the syllabus development process are: (1) the array of representative stakeholder groups on syllabus committees; (2) actual and perceived control and authority in committees; (3) strategies for balancing academic and professional content criteria with political and public concerns; and (4) the process of vetting interim documents with the profession on the one side and political and public

interest groups on the other. A widely representative and transparent process may tend to be contentious and time consuming but may be expected to yield higher legitimacy.

Support Documents

-at the Government Level

In Ontario, syllabus documents are supplemented by an array of support documents. For instance, for Ontario's Grade One syllabus, for the topic *Matter and Materials: Cleaning up Skills* there is:

1. A chart of *task rubrics* organized by level of achievement. "Rubric" is defined as achievement criteria and descriptions of four levels of achievement for each task;

2. *Student samples*: These are actual student responses organized by the rubrics;

3. Teacher package: A detailed breakdown, by time including *description of task*, *instructions for students*, *curriculum expectations, teacher instructions*, *directions on use of the rubrics*, *tasks* that might be followed, a detailed *exemplar* task, and an Appendix of *work sheets* that might be used with students.

- at the Board of Education Level

1. Boards of education may take on an important role in the development of curriculum support documents to augment the syllabus. Boards of education may even develop syllabus documents and courses of study independently, though these normally need government approval. The Toronto District School Board, the largest school board in Ontario with 266,000 students in 560 schools, representing over 13% of Ontario students, has a vast array of professional support documents that rival government efforts in breadth and detail. Smaller boards of education may have little role in the development of support documents. In the current age of electronic information availability, almost all boards of education provide electronic resource leads. Sharing of resources from different jurisdictions is common.

2. Built-In Links among *Curriculum Content*, *Curriculum Standards* (expressed as expectations in the Ontario Elementary Curriculum) and *Achievement*

The discussion of support documents above shows how closely expectations and achievement (the rubrics) are to syllabus documents in the Ontario curriculum. The syllabus for Grades One to Eight contains a *conceptual/content grid* for the science curriculum along with student *expectations* at each of *four achievement levels*.

Boards of Education, Syllabus documents and the Politics of Curriculum

Because the system of curriculum deliberation ranges from the public to the local school level (Figures 1 and 2) the system is only loosely coupled. This means that notwithstanding efforts at government implementation of syllabus documents, a wide diversity of board and school development occurs and, in Ontario, is encouraged. One of the political consequences of this loosely coupled system is that support documents developed at a board level may generate heated public/political discourse and reflect directly back on the political party in power. For this reason, in democratic systems, and certainly in Ontario, the Minister of Education maintains close political contact with elected school board trustees, maintaining a watchful eye on possible political consequences of local curriculum activity.

Level of Professional Teaching Expertise in a Syllabus Area

In general, as noted above, one of the functions of a good syllabus is to enhance teacher professionalism. In general, this will tend to occur where there is low syllabus specification and relatively high teacher professionalism. But the relationship of expertise to content varies from subject to subject and from grade level to grade level.

Teacher Professionalism and the Democratic Process

There may be tension between teacher professionalism and the democratic political process of involving non-professional stakeholders in the syllabus development process. The professional role of teachers, academics, and other professionals is muted in a democratic syllabus development process.

Relationship of Syllabus Topic to Political/Public Discourse

Because of the *policy instrument function* of syllabus documents, they vary widely in their political sensitivity at any point in time. If, for instance, equity is a hot political topic any syllabus thought to be particularly relevant will come in for extra scrutiny and

may require lengthier, more detailed, explanation. Syllabus documents reflect public political discourse and decisions over syllabus process and content must necessarily reflect the topic's public status.

The Implementation Process

New and revised syllabus documents normally enter a government-driven implementation process. This process reflects the dual functions of syllabi: *policy instrument* <u>and</u> *practical guideline function*. While almost all implementation efforts are publicly justified in terms of their practical aims the process may be highly political. New syllabus documents may meet with resistance from teacher groups and, more important, may meet with resistance and/or approval by parents and other school community groups. As a result, in democratic systems like Ontario, syllabus implementation has a political/public side in addition to its academic content side. In Ontario a broad representative government appointed implementation committee oversees a process reaching into local in-school implementation committees, faculties of education and the education of new teachers, in-service professional development work, and teacher federation professional development activities.

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A CALL TO HONOUR: TEACHER PROFESSIONALISM IN THE CONTEXT OF STANDARDS REFERENCED ASSESSMENT REFORM

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Introduction

Standards-driven reform, tied to reporting, engages directly with assessment issues related to accountability. Assessment is the key to good education and is inseparable from curriculum. In an accountability context standards are used as a lever to improve the reliability and consistency of teacher judgement and classroom evidence is used by education systems for reporting and tracking achievement over time. Assessment is thus a powerful driver for change and is at the heart of the teaching-learning dynamic. The relationship between the learner, learning and assessment needs to be kept central and the idea of teacher empowerment is fundamental. This paper is a call to honour teacher professionalism through educative forms of school-based and teacher-led evaluation, assessment and communities of judgement practice. It supports the argument for a central place for classroom assessment in the role of assessment in educational accountability.

Given the current quest for 'national consistency in education' using standards-referenced assessment systems, involving student assessment and reporting against national benchmarks, it is important to make explicit the intended and unintended consequences of such strategies. At the outset it is beneficial to acknowledge the inexorable existence of the pressures to pervert. In a context that is standards-driven and values standardization, there is a great danger that technical, rationalist approaches that generalize and make superficial assessment tasks and practices, will emerge. Attaining coherence between classroom assessment and system level accountability that includes system interest in transparency of outcomes has been much debated (Wilson, 2004; Fredericksen and White, 2004). It is teachers' judgements and interpretations of assessment data in the context of social moderation that is key. For it is teachers who have direct access to the information needed for an accountability system.

To help understand the tensions that are involved in such a situation a framework, representing important dimensions, will be introduced first. Concepts and definitions of terms as they are used in this paper, such as accountability and standards, will also be given. This paper will then outline the different assessment regimes and associated practices for achieving accountability in the context of standards-based reform and in so doing will highlight their value and limitations. What is apparent in this analysis is the central role of teacher empowerment and professionalism in the case for intelligent accountability and more generative and educative forms of assessment, pedagogy and curriculum to enhance quality and improve equity of educational provision.

Framework

A framework for understanding how schools develop and improve has been described by MacBeath (1999). It is relevant in a context of accountability and standards-referenced assessment reform. The three dimensions of school evaluation and development that are pertinent include:

- Internal – external continuum from self-evaluation at one extreme to evaluation from an outside source at the other;

- Pressure - support continuum with a high level of support from the system at one end and strong pressure at the other;

- The top-down – bottom-up dimension which represents how a system sees and implements change.

For the purpose of this paper the latter dimension requires further description. At one end of this continuum the change is delivered from above by legislation or by national structures, and at the other end the change can come from below, that is from teachers, from students and parents, building on day-to-day school and classroom experience. MacBeath (1999) explains that neither extreme is ideal but the best kind of system is one in which bottom-up development is supported and endorsed from the top down.

To assist schools to grow it is now accepted that an optimum blend of all three – internal and external evaluation, support and pressure, bottom-up and top-down change, - is required. The key factor that determines whether schools will flourish, or not, is the right combination. The ideal being that the direction of change is from internal to

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external evaluation, from pressure to support and from bottom up development to top down implementation of change. However, the optimum combination is dependent on the history, context and culture and the school's own state of 'psychological health' as this will differ from state to state, from district to district, from school to school (ibid). The importance of bottom up development acknowledges the key role of the teacher at the local professional level of the school.

Accountability

Schools are accountable for what they do for students. In the 1980s the discourse of markets emerged in education and the place and purpose of accountability was made explicit. At that time, particularly in England, the dangers of 'raw' exam or test results for accountability purposes were identified. Accountability was dominated by inspection and standardized testing, the main criteria for judging school performance and measuring success in terms of student achievement. Using assessment results in this way can lead to schools being rewarded for the 'quality' of the students they can attract and enrol rather than what they actually do for students to help them achieve. It is students, their teachers and their parents, who know and work with them in different settings, who are the primary sources of information to ascertain what schools do for students (MacBeath, 1999).

Intelligent accountability policies, such as those of Finland, (Sahlberg, 2007) involve trust-based professionalism which grows over time from an ethos of respect within the education system that values teachers' and principals' professionalism in judging what is best for students and in reporting their achievements. In the Finnish education context intelligent accountability enhances trust among teachers, students and education authorities in the accountability processes. What is more, they are involved in the process so they develop a strong sense of professional responsibility and initiative (Fullan, 2005; Sahlberg, 2006). The impact on teaching and student learning has been positive. Assessment of student learning is based on teacher-led assessment rather than standardized external tests, numerical grades are not used after grade five so that students are not compared with another. Grades are prohibited by law and only descriptive assessments and feedback are used which current research informs us will impact positively on student performance and engagement in their learning (Assessment Reform Group, 1999). Teacher-made classroom assessment is a dominant practice and

is used by teachers as an opportunity for learning as much as for assessing student achievement.

The shortcomings of such a system that relies on teachers' and schools' abilities to judge and report on students' achievement is that there are differences among criteria that teachers use to evaluate their students, even within the same school. Issues arise when students move to a new school and experience assessment that may involve different expectations than those of their previous school. Despite these shortcomings the concept of intelligent accountability is preferred as it enables schools to keep the focus on learning and allows more freedom in curriculum planning compared with external standardized testing contexts.

Standards

The term 'standards' is ubiquitous but there are no simple measuring instruments that can be used to determine an appropriate value for a student's achievement or for that matter of a school. There is no natural unit of measurement as there is for some physical quantities, such as weight or height. The concept of standards is elusive and to avoid confusion it is important to understand that the term can be used in a variety of ways.

These are:

- Moral or ethical imperatives (i.e. should do);

- Legal or regulatory requirements (i.e. must do);

- Quality benchmarks (i.e. expected);

- Arbiters of performance quality (i.e. defining success or merit); and/or

- Learning milestones (i.e. progressive targets). (Maxwell, 2002a)

In this paper the definitions that are most appropriate in the context of standards - referenced assessment systems for accountability include: 'quality benchmarks' and 'arbiters of performance quality'.

The functions of standards as defined in this way are to:

- Provide a common frame of reference and a shared language for communicating student achievement;

- Promote teachers' professional learning, focused on good assessment practices and judgement of the quality of student achievement against system level benchmarks; and to

- Present more meaningful reports and engagement with assessment as a learning process.

Standards as descriptors of student achievement are used to monitor growth in student learning and provide information about the quality of student achievement. It is important to emphasise that examination or assessment standards cannot be objective in the same sense in which standards relating to physical measurements are objective. Assessment in education is inherently inexact and should be treated as such (Harlen, 1994).

Some key principles for standards descriptors are:

- Capacity for schools to relate to the standards;

- Grounded in practice and piloted;

- Use of student work to substantiate meaning;

- Capable of being moderated;

- Written in positive terms and suitable language for the intended audience; and

- Encompass minimum and aspirational performances.

The interpretation of assessment results should be in terms of being an indication of what students can do but not an exact specification (Cresswell, 2000). Defining examination or assessment standards requires interpretation and inference which means that they are fundamentally subjective. To define standards as used in examination and assessment systems for public reporting we must define:

- What should be assessed;

- The levels of attainment which are comparable to those represented by each grade in other examinations or assessments in the same family (ibid:71-72).

To understand examination or assessment standards we need to consider both of these aspects. However, to compare attainment in different subjects we can only use indirect bases for comparison and for this we rely on statistics and expert judgement (ibid).

Once again the role of the teacher is significant and in this context they have an important role in a community of judgement practice. This role will be addressed later in this paper.

Standards for Assessment or Test Use

High-stakes assessments are enacted by policy makers to improve education and, setting high standards of achievement, can inspire greater effort on the part of students, teachers and principals. The inadequacy of high-stakes assessments, or the lack of sufficient reliability or validity for their intended purposes, has the potential for unintended and harmful consequences. Policy makers can be misled by 'spurious' increases in assessment results that do not relate to improved learning; students may be placed at increased risk of failure or disengagement from schooling; teachers may be blamed or punished for inequitable resources which remains beyond their control; and curriculum and teaching can become distorted if high grades or results per se, rather than learning, become the overriding goal.

The American Educational Research Association's (AERA: 2000) Position Statement Concerning High-Stakes Testing in Pre K-12 Education represents a professional consensus on standards concerning sound and appropriate test use in education.

Conditions for implementation of high-stakes education assessment programmes are:

- Protection against high-stakes decisions based on a single test;

- Adequate resources and opportunity to learn;

- Validation for each separate intended use of the high-stakes assessment;

- Alignment between the assessment and the curriculum;

- The validity of the passing scores and achievement levels;

- Opportunities for meaningful remediation for examinees who fail high stakes assessments;

- Appropriate attention to students with disabilities;

- Appropriate attention to language differences among examinees;

- Careful adherence to explicit rules for determining which students are to be tested;

- Sufficient reliability for each intended use; and

- Ongoing evaluation of intended and unintended effects of high-stakes testing (ibid, 2-5).

Linn (n.d: 4) has offered suggestions for policymakers regarding ways to improve the validity, credibility and positive impact of assessment systems while minimizing their negative impact. These suggestions include:

- Set standards that are high but attainable;

- Develop standards then assessments;

- Include all students in the testing programs except those with the most severe disabilities;

- Useful high-stakes accountability requires new high-quality assessments each year that are comparable to those of previous years;

- Avoid putting all the weight on a single test when making important decisions about students and schools;

- Place more emphasis on comparisons of performance from year to year than from school to school;

- Set both long- and short-term school goals for all schools to reach;

- Uncertainty in any educational testing systems should be reported in all test results;

- Evaluate both the positive effects of standards-based assessments and the unintended negative effects of the testing systems;

Narrowing the achievement gap means that we must provide all children with the teachers and resources they need in order to reach our high expectations. This means improving the educational system as a whole, not just more testing or new testing systems.

Quantitative Assessments

The last decade of the twentieth century saw increased international dissatisfaction with the more quantitative, traditional forms of assessment. Much of this aversion stemmed from the view of learning on which these assessments were designed and their impacts on teaching and learning. Assessment approaches from this quantitative tradition have been challenged and alternative approaches have emerged.

The major criticisms of quantitative approaches to assessment are as follows:

- Teachers teach to the test;

- External assessment for accountability purposes impact detrimentally on pedagogy and inhibit educational assessment;

- Tests drive and narrow the curriculum;

- Standardised tests assess lower-level thinking skills to the neglect of the higher level thinking and learning skills;

- Emphasis on test results and standards focus on products and academic purposes to the detriment of the social, affective and physical educational purposes;

- Summative test results provide teachers with inadequate information for teaching purposes; and

- Meaningful feedback for student development is often lacking.

The changing emphases in assessment reform include a move away from assessing knowledge and products to assessing skills, understandings and processes. Also rather than assessment occurring at the end of a course through external means assessment has been taking place throughout the course. A greater variety of methods and evidence has been sought to demonstrate learning instead of relying only on written methods and this has been accompanied by a shift from norm referencing to criterion referencing with less reliance on pass or fail, summative assessments and more attention on identifying strengths and weaknesses formatively and recording positive achievement (Torrance, 1997: 329).

Teacher-based Assessment

With such shifts in assessment practice the teacher assumes an important role and requires an understanding of the fundamental issues in assessment design which are 'fit for purpose' and the need for the mode of assessment to impact positively on teaching and learning. Other characteristics of good assessment include:

- Reliable and consistent outcomes;

- Comparable judgements across assessors;

- Free from bias;

- Valid in that the assessment is true to what is taught and learned;

- Rigorous;

- Supports learning and reflection, including formative assessment;

- Open and connected to criteria rather than to comparative performance of others;

- Include a range of assessment strategies so that all learners have a chance to perform well.

Assessment tasks therefore need to involve a variety of contexts, range of modes within the assessment, range of response formats and styles. To achieve equity there is also a need to expand the range of indicators used to provide an opportunity for those who might be disadvantaged by one form of assessment to offer alternative evidence of their expertise. To achieve this form of assessment practice requires teacher-led assessment and communities of judgement practice.

Teacher-based assessment therefore offers an important alternative because in this context locally developed indicators can prove to be more effective educationally than examinations or tests administered from the centre. The teacher is able to attend to the student's needs that emerge from a particular context, sociocultural or historical background. One testing method does not fit all circumstances. Multiple judges are recommended and Queensland's Senior Secondary System is one such example. Students' work is assessed at the local level and forms part of the state system of assessment of student performance. Assessment data is collected both formally and

informally and used by teachers and administrators to set learning goals and priorities to build on what students already know.

Standard-setting and assessment are linked as teachers design assessments that are intellectually challenging for their students. Teachers set standards as they identify the tasks that they want students to complete for assessment and they provide various opportunities for students to display thoughtful control over ideas.

Alternative Authentic Assessments

Alternative assessment methods have emerged in response to the dissatisfaction with quantitative systems. A catalyst for such change has been the realization that the type of assessment impacts profoundly on the learning dispositions, attitudes, strategies adopted and learning ability. Developments in both learning theories and the theory of educational assessment (Gipps, 1994) have supported the move towards authentic, alternative assessments.

Critique of the utility of tests in measuring what students actually know inspired a move towards 'alternative, authentic assessment approaches' (Wiggins, 1989, 1991; Newmann, 1991). Authentic assessment includes tasks that challenge the student's intellect and test intellectual ability in a manner which reflects probable experience for the individual in the field. Authentic assessment:

- Connects to the curriculum;

- Engages students, teachers and others in assessing performance;

- Looks beyond the school for models and sites of action;

- Promotes complex thinking and problem solving;

- Encourages student 'performance' of their learning and

- Engages with issues of equity.

Alternative authentic assessments are varied and comprehensive encouraging multiple methods for demonstrating learning. Problem-solving in this assessment context requires students to think analytically and demonstrate their proficiency as they would in situations beyond the classroom. Such assessments encourage students to develop skills, understandings and insights relevant to their particular needs and contexts.

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These approaches attend to equity issues by making assessment fairer by reducing the dependence on performance in a single terminal examination as the only determinant of student achievement and by giving individuals the opportunity to demonstrate attainment over time and in a variety of contexts. This type of assessment is more accurate, and reflective of an individual's learning and development, by identifying the abilities being examined. This helps to encompass a wider range of abilities and facilitates the recording of achievement.

Implications for Teacher Assessment in Standards-Driven Reform

Teachers need the freedom to make definitive evidence-based judgements on their students' work according to established standards and a quality framework that guarantees the dependability of teacher-led assessments. The key is to use external scrutiny to maintain the quality and professionalism of teachers' own judgements.

At the upper secondary level the assessment regime needs to reflect finer distinctions between student performance to fulfil the role of assessment for selection purposes for a wider range of destinations and progression opportunities than other levels of schooling. This is where effective and widespread use of the professional judgement of teachers is required more than ever and needs to be supported by rigorous quality assurance systems. Moderation is one such system that serves both accountability and improvement purposes. Moderation allows for comparability of standards both within, and, between schools and an audit of range and balance in curriculum coverage is part of the process. The teacher's role is fundamental in this process as from an analysis of the assessment data teachers develop their curriculum plans and base their teaching on the learning needs of their students.

Moderation

Moderation assists in developing coherence across the educational system. Consistency, comparability and equity are three principles relevant to moderation practice (Maxwell, 2002b). Consistency involves constancy of judgement by the individual teacher with respect to the same evidence judged at different times and involves the equivalent application of standards across different types of evidence and opportunities for assessment. Comparability is a within-subject comparison against the performance

standards for the subject. Identical aspects of knowledge, understanding and skill are not required, but equivalence of standards in terms of knowledge, understanding and skill is expected for that level of achievement. Students can be set different tasks but demonstrate a common standard of performance revealing equivalent levels of knowledge, understanding and skill.

Equity involves the opportunity for every student to reach and demonstrate their current capability. Students may demonstrate their knowledge, skills and understanding in a variety of ways so the concern should be whether they have had suitable opportunity to demonstrate what they know and can do. Moderation practice helps to ensure that these characteristics have been addressed in making judgements and that students' performances have been appropriately compared with the standard.

Moderation for accountability provides official confirmation of assessments used to report on individual students, or for cohorts of students and involves validation (Maxwell, 2002b). Validation presumes that if teachers are making appropriate judgements about a selected cross-section of student demonstrations, they will be making appropriate judgements about other student demonstrations. Moderation for accountability is designed to ensure fairness by adjusting results where there seems to be inconsistency or differences (Harlen, 1994). The moderation procedures monitor and assure comparability of the grades that are determined by this process. Important assessment data and advice are provided to teachers and schools concerning their judgements and such feedback fulfils an important quality assurance role.

Moderation for improvement involves collaborative processes promoting the professional development of teachers to undertake appropriate assessments, and to make consistent and comparable judgements (Maxwell, 2002b). It is ongoing and provides feedback for further development of comparability and may focus on both procedures and outcomes.

Research indicates that teachers who engage consistently in the moderation process are able to:

- Assess student performance more consistently, effectively, confidently and fairly;

- Build common knowledge about curriculum expectations and levels of achievement;

- Identify strengths and areas for growth based on evidence of student learning;

- Adjust and acquire new learning by comparing one's thinking to that of another student or teachers;

- Share effective practices to meet the needs of all students, monitor progress, and celebrate growth. (Little et al., 2003)

The Queensland Studies Authority (QSA) uses moderation as a quality assurance process for senior secondary studies. Moderation processes are directed at supporting and confirming understandings about judgements and performance. Teachers use assessment criteria and explicit standards to make professional judgements about performance levels demonstrated by students in the completion of assessed tasks. Teachers and assessors reach agreement about assessments through discussion, critique and debate. They use evidence of student work to develop common understandings of the curriculum and levels of achievement to inform teaching and learning, monitoring and assessing, reporting and evaluation (Ralston & Newman, 1999).

This approach to moderation at a system level serves as vital accountability checks and balances on efforts to achieve, and demonstrate, reliability of teacher judgement in high-stakes assessment. Beyond this, however, the process of system facilitated and supported moderation provides professional development opportunities for teachers in planning teaching and learning programs, designing suitably challenging assessment tasks with accompanying statements of criteria and standards, as well as making judgements of student performance. Essentially, it is moderation that ensures that common standards are being achieved and also helps to provide comparability against benchmarks expressed as desirable features.

Increased Teacher Professionalism

Professional development occurs naturalistically through the agency of the teachers themselves as they share their knowledge and experience about working with standards in diverse school contexts and institutional settings. It is the important teacher talk and interactions during moderation meetings that impact positively on assessment practices,

task design, student learning and teaching. Teacher moderation is most effective when there is "productive conflict" embedded in the school's culture and teachers are confident to express their thinking, asking questions about the assessment data or learning after listening to others (Curriculum Services Canada, 2007). Professional learning extends beyond the time and site of the moderation meeting.

Increased professionalism, richer learning for teachers and students and more professional conversations are some of the professional benefits achievable from moderation practice. In the New Basics project schools students complete 'rich tasks' which are carefully chosen to be intellectually challenging and to have real-world value. They are authentic. Performance on these tasks provides an informed and elaborate portrait of a student's achievement. The evaluation of the Consensus Based Standards Validation Process of moderation used in these primary and lower secondary levels (Klenowski, 2007) found that:

- Teacher professionalism had grown in terms of teacher confidence, building knowledge of strategies, procedures and systems to assess student work;

- Teacher professional development is inherent in the process as teachers engage in rich learning conversations focused on student work and learning;

- The level of professional conversations increased with a focus on improvement of current teaching and learning classroom practices;

- Teachers gained creative ideas from a broader view of what other teachers have used to achieve success;

- Teachers benefited from working and planning the assessment task together as there is richness in the learning experience;

- A collegial atmosphere developed with teams of teachers planning, sharing ideas and demonstrating accountability.

Teachers have the most direct impact on student achievement and their role during moderation practice is fundamental.

Conclusion

Too often the policy context results in unintended consequences and unhelpful pressures on the development of assessment systems. The intended learning benefits of more productive assessment approaches are not brought to fruition; they are simply frustrated. Assessment has the potential to develop and sustain the teacher's engagement in judgement practice and curriculum planning. As has been illustrated in this paper the teacher's role is key. It is school-based and teacher-led assessment that has the potential to address equity issues together with the support from the political centre.

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THE TECHNOLOGICAL SOLUTION TO READING EDUCATION: A CENTURY OF FRUSTRATION

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The quest for certainty in schooling promises personal and social benefits. If governments could make the outcomes of public education more predictable through the manipulation of instructional inputs, then individuals would be able to continuously educate themselves in order to meet the demands of fluid global economies. The predictable skills of a workforce would enable businesses to enter employees into the calculus of their production plans with confidence that profits would follow and enable each individual to negotiate a future with rapid technological changes. Without this predictability, businesses will struggle to remain competitive and individuals will struggle to keep pace with the changes in employment. In order to act on this quest, educators and government officials have turned to science, technology, and business practices to find the one best method to teach all subjects. After a century of trying, however, the results have been disappointing at best and detrimental to both business and individuals in general.

All nations seeking to participate in the global economy embrace this quest. Rather than survey all subject areas generally and a subset of countries, however, I discuss reading education in the United States because it provides the most prolonged and highly detailed attempt to realize this logic. Moreover, the consequences of these actions are clearly documented in decades of testing. Taking a pragmatic approach, history and consequences are the best evidence that is available to judge the adequacy of an approach to schooling.

From the invention of the teachers' manual in the 1920s to the present day scripted lessons and corresponding tests, educational scientists, commercial publishers, and the state have coordinated their efforts to develop a system of instruction that is expected to teach all students to read. Scientists work within closed environments in order to identify the variables of reading and instruction that prove to be most powerful.

Commercial publishers translate these scientific findings into technologies that teachers could use to improve the predictability of outcomes. The state ensures that those technologies are available and that the teachers use them. Over this ninety-year period, scientists and publishers have developed the technologies to their full capacities – the federally funded National Reading Panel Report states that there is a consensus on what reading is and how to teach it (National Reading Panel Report, 2000). Elaborate and detailed technologies are used in over ninety-five percent of elementary classrooms (Brownstein & Hicks, 2005). And the federal government now insists that these technologies are employed in order to qualify for federal funding (Manzo, 2005). Yet, reading achievement lags well below expected levels, particularly for targeted populations, and business continues to worry about the literacy levels of current and prospective managers and workers.

A First Attempt

At the turn of the nineteenth century, individuals and businesses faced similar challenges as they do today. The United States was changing rapidly from agrarian communities to industrialized cities, requiring a new skills set. Time honored ways of production were considered too slow and unreliable to meet the demands for new goods In order to compete; businesses needed workers who could hone their productive behaviors according to the new criteria of time and precision in order to produce uniform goods in greater quantities. Using these criteria, industrial experts examined the productive actions of master craftsman in order to define the best method for production of each good. Labeled "scientific management" by Frederick Winslow Taylor, newly created work experts divided the labor of the craftsman into elementary movements, eliminated the useless ones, standardized the remaining ones, and then, wrote the rules and procedures for that behavior on instructional cards in order to make them easily replicated across settings (Taylor, 1912). If workers followed these instructions, then cost of production decreased, worker productivity increased, and profits rose accordingly. To monitor the fidelity of the work, foreman and managerial positions were created in a similar way.

At the same time, efforts to bring scientific methods to the traditional philosophic study of people's minds and thinking created a new set of experts, educational psychologists, who sought to redefine reading, learning and teaching according to scientific principles

(Venezky, 1984). The psychology of reading was forged analytically from the assumption that reading involved three stages: perception, translation, and then, thinking. Studies of cues for letter and word recognition, eye voice span, and sub-vocalization led to the development of tests that could pin point the route of reading step by step from perception of print to its translation to phonemes and words, and then different tests were invented in order to probe readers' thinking about those words. Perceptual and translation tests considered letters, letter strings, words, and sentences; and thinking tests were short passages to be read silently with several questions to follow.

Learning was redefined as sequential mastery of sub-skills leading to the summation of a complex behavior (Thorndike, 1906). Learning the three stages of reading began with connections between letter stimuli and production of corresponding phonemes. Teaching reading, then, became the application of the scientific laws of learning – learning followed one order from simple skills to complex behaviors, practice increased the likelihood of connections between stimuli and responses, positive feelings associated with connections enhanced these bonds and increased the likelihood that new skills would be connected to those already mastered. Testing of each skill in isolation would determine if students would progress to the next skill in the sequence.

These movements merged in the work of the National Society for the Study of Education (NSSE) between 1915 and 1919 (Horn, 1919). Educational experts were charged with applying principles of scientific management to eliminate waste and improve productivity of schools. In "Principles of Methods in Teaching Reading as Derived from Scientific Investigation", William S. Gray induced forty-eight principles of teaching reading after reviewing thirty-five experiments and observational studies (Gray, 1919). As Frederick Taylor found in steel mills, Gray noted that schools had master teachers working beside novices who had little idea of how to teach reading. The NSSE addressed this issue not by engaging the neophyte teachers in discussions about reading, children, and teaching, but by evaluating more closely the existing school textbooks according to the results of scientific management committees. In reading instruction, the organization's recommendations were to standardize practice through the equivalent of instructional cards – adoption of a single textbook series throughout a school with a detailed teachers' manual at each grade level.

Reading textbook publishers hired Gray and other members of the NSSE committees in order to produce the manuals for their series (Smith, 2002).[9] Within three years, each textbook company increased its directions for teachers from the traditional one or two paged preface in its previous editions to hundreds of pages of didactic instructions on how to use the materials at each grade level correctly. Lessons were organized around the three-stage model of reading according to Thorndike's laws of learning. Perception and translation skills were identified, defined explicitly and sequenced by difficulty, skill practices were developed and packaged in disposable workbooks forms, simple scripts were written to direct teacher and student interchanges, and eventually special tests were created for each skill in order to measure mastery. Publishers and reading experts offered these technological innovations to administrators and teachers as scientific facts to be followed regardless of the social context of the instructions or the abilities and attitudes of the students and teachers. All assumed that if the directions were followed explicitly, then all students would learn to read efficiently and effectively.

A Second Attempt

By the late 1920s, the logic and technology were in place to direct the quest for certainty in reading instruction. Standardization of scientific inputs was expected to bring predictable outcomes, enabling students to succeed at school and later at work. With the authority of science, business and the state behind it, the project was nearly complete by the 1960s. Surveys demonstrated that over ninety-five percent of teachers acknowledged that they used the technologies during their instruction, leading the researchers to quip that teachers used the manuals "slavishly" and "teachers think they are professionals – but want to rely on basal readers, graded workbooks, and teachers' manuals, and other materials prefabricated by the experts" (Austin & Morrison, 1963). Despite the implementation of the project, experts, business and the state were not satisfied with the results because significant percentages of American students, particularly the poor and minority students, were not scoring high enough on national achievement tests (House, 1978).

Through philanthropic and federal funding, the National Conference on Research in English engaged in what became know as the *First Grade Studies* in order to find the one best method among the commercial technologies available (see Reading Research

Quarterly, 32, 1). Although a combination of perceptual and translation approaches brought higher test scores than perceptual approaches alone, the twenty-seven researchers involved in the project concluded that no method or combination of methods was effective with all students. There was as much variation of students' tests scores within a method as there was among methods. In other words, differences in teacher knowledge and practices accounted for the successes and failures of students' learning to read regardless of which technologies they used.

It is important to note that the federal government deviated slightly from its historical pattern in education during the 1960s. While they continued to fund studies to find the one best system of reading through the *Head Start* and *Follow Through* studies, the *War on Poverty* legislation provided support for poor families through the Economic Opportunities Act and the Social Security Act of 1965, providing assistance for food, shelter, and health care. For the next decade, students' test scores rose and the gaps between rich and poor and black and white students closed modestly (Berliner, 2006).

In response to the *First Grade Studies*, reading experts and publishers reemployed the fundamentals of scientific management and the laws of learning (Rosenshine & Stevens, 1984). With federal funding, the experts designed new studies and experiments in order to isolate the salient practices of effective teachers and effective schools with the intent to strengthen the prescription in teachers' manuals. Time on task, explicit instruction on comprehension, and content coverage were highlighted. Effective teachers provided more direct instruction because they prioritized their lessons and eliminated transition times; they recognized that the thinking stage of reading required direct intervention to improve, and they pushed their students through the lengthy scope and sequence of skills provided in the manuals at a rapid pace. Publishers were quick to make these adjustments to their manuals.

Publishers championed tests for each skill in the scope and sequence and promoted those outcomes as a way to measure student learning (Johnston, 1984). They argued that an accumulation of successful series skill tests scores was an equivalent, perhaps preferable, representation of students' reading when compared to paragraph and question formats for reading achievement tests. Such skill tests enable administrators to monitor students' learning and teachers' instruction more closely by tracking student scores. If scores were low, teachers and administrators knew which skills to re-teach

and re-test. If the scores remained low administrators knew which teachers needed support in using the technology correctly. At some point, students would become capable of demonstrating their reading abilities on national achievement tests as well as the commercial skill tests.

A Third Attempt

In 1983, the *A Nation At Risk* report articulated federal and business officials' frustration with America's public education system (A Nation at Risk, 1983). Citing its inability to produce workers with sufficient skills to handle the new literacy demands of shifting national and global employment, the report called for national standards, testing and policies that would enable American business to compete internationally. Flexibility, problem solving, and entrepreneurship were to replace the decades old skills of time and precision within a singular system Marshall & Tucker, 1992). Although tensions arose among groups of experts over the causes of problems in public schools, all agreed that a technological solution was still the best approach to the quest for certainty of outcomes.

Since the 1980s, the federal government has been more assertive in public schools matters. *America 2000*, *Goals 2000*, *Educate America*, and *No Child Left Behind* legislation became progressively more insistent on the employment of a tight accountability system that begins with scripted lessons from commercial publishers and ends with test scores that demonstrate a nation of proficient readers (Allington, 2002). Although state education departments continue to operate the checks and balances of that system, federal government controls policy compliance through funding incentives (and disincentives). To gain scientific legitimacy for its position, the federal government brokered consensus among reading experts through a series of experimental studies and reports.

The Centers for the Study of Reading, the National Institute of Child Health and Human Development, and Center for the Improvement of Early Reading Achievement provided a steady stream of research affirming and shaping the reality of the three stage model of reading and the laws of learning that was summarized in a series of state of the art of teaching reading reports – *Becoming a Nation of Readers* (1985), *Beginning to Read* (1990), *Preventing Reading Difficulties in Young Children* (1998), and *National*

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Reading Panel report (2000). (Anderson, 1985) At present, the federal government defines reading as the deployment of alphabetics, phonics, fluency, vocabulary, and comprehension. Teaching then becomes the direct instruction of each component from perception through translation to thinking about text in route to proficiency scores on state reading tests.

Members of the Business Roundtable partnered with the federal government throughout the third attempt to find the one best system for teaching reading[3]. Their involvement began by co-sponsoring the Educational Summit during National Governor's Conference in 1988 and continues to its current efforts to provide national academic literacy standards for high school graduation (*The American Diploma Project*). Intending to accelerate the rate of school improvement, the Business Roundtable promoted somewhat contradictory proposals to increase federal regulation of public schools, while increasing private competition through individual educational vouchers. With each educational policy, educational publishers and entrepreneurs moved swiftly to produce the instructional and testing technology of required under the laws (Miner, 2004). *The No Child Left Behind* legislation has proven to be a boon to publishers. Beyond the textbooks and tests, corporations now supply test preparation materials, information management systems, primary and supplemental curricula, professional development, and other elements of the required accountability systems. These corporations have been labeled 'Bush stocks' because their markets appear guaranteed under the federal legislation (Metcalf, 2004).

Although variations among and within states continue, once again, standardization of input is nearly complete with new commercial highly scripted lessons, programmed practices, and objective skill tests for teachers to follow. Reading coaches are the new foremen ensuring the fidelity of each teacher to technology and state; and federal funding ensures that each district has the technology in place. Legislators, administrators and the public can monitor every facet of reading education according to students' scores on mandated state reading tests at each grade between third and eighth and once again in high school. According to the logic of the quest for certainty, a nation of proficient readers capable of meeting the literacy demands of employment should follow shortly. But that has not been the case.

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[3] see the Business Roundtable website for its education archives and current projects

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Current Results

In the 2007 State of the Union Address, President George W. Bush called on Congress to reauthorize *No Child Left Behind* legislation "because it's working." His claim has only modest support within the test score data collected in each school district across America. A *2006 Education Trust* report concluded that modest gains in state reading test scores have been made at the elementary levels, if success is defined as the percentages of students scoring above the states' proficiency cutoff scores (Hall & Kennedy, 2006). African American and Latino students narrowed slightly the achievement gaps on these tests at the elementary level as well. The results were less encouraging at the middle school and high school levels as some states demonstrated declines on the tests during the three-year period in question.

Adding further caution, the Education Trust reported that *National Assessment of Education Progress* results do not corroborate state test gains. Only six states demonstrated comparable results at both levels, while the remainder reported state proficiency rates two and sometimes three times higher than the national test. For example, Alabama demonstrated 83 percent proficiency on the state test, but only 22 percent on the NAEP; New Jersey's proficiency scores were 82 percent for state and 37 for national; and Oregon's were 81 percent and 29 percent. The NAEP is named the national report card in the *No Child Left Behind* legislation.

The Civil Rights Project examined the same data as the Education Trust and drew four less optimistic conclusions:

- NCLB had not had a significant general impact on reading achievement across the nation. At current rate of growth, only 34 percent of American students will be proficient by 2014 (not the 100 percent required by NCLB).

- NCLB is not closing the racial gaps, although slightly more minority students are reaching proficiency. By 2014 at current rates, only 24 percent of poor or minority students will reach proficiency.

- The model states for NCLB (Texas, Florida, and North Carolina) did not show significant gains before NCLB and have not been improved since the legislation was passed. Trends over longer periods of time, then, are not promising.

- Finally, the state test data are most misleading for poor and minority students. Although state tests overestimate white students' reading proficiency by a factor of two, the state tests inflate African American students' proficiency by a factor of four (Lee, 2006).

In the introduction to the report, the Civil Rights Project Director Gary Orfield does not mince words:

> The goals of raising achievement and lowering the gaps are very good ones, and the data provided by NCLB is (sic) essential, but policy makers must be ready to critically examine why so little has been accomplished, why officials are making misleading and inaccurate claims, and what can be done to use the invaluable data and focus created by the Act to begin to actually accelerate progress toward those objectives (p. 8).

Orfield's statement challenges scientific management as the means to achieve the goals of developing a work force for the 21st century. At each opportunity in the 1920s, 60s, and 80s when empirical data suggested that teachers' knowledge made the difference in students' achievement, experts have opted for technological solutions rather than investing in teacher education. When the technology failed to develop a nation of readers, experts blamed teachers' devotion to their work and sought tighter systems of control. *No Child Left Behind* applies the tightest regulations with more scripted commercial materials and tests available than ever before. In order to make more time for students to learn the tested skills, districts and teachers curtail music, art, social studies, science, and often writing because these subjects are not tested. Yet, the test scores lag; and businesses continue to complain about workers' literacy. After nearly a century, the technological solution has failed in the United States (Shannon, 2007).

Many Best Methods

In the face of increasing accountability, the Nebraska Department of Education has resisted the technological solution to school reform (see Educational Measurement, 23). Rather than follow the directives of science, business and the federal government, Nebraska educators work to make all teachers into craftsmen who can provide the needed adjustments in their instruction to help all children reach local, state and national standards. Despite considerable local and national pressure to conform, state educational officials have developed a local control system over the last decade that has kept pace with the other 49 heavily centralized state systems to date and has

demonstrated the only positive trend pointing toward the goal of every child learning to capacity. The crux of the difference is a commitment to informed judgment of individual teachers to understand the dynamic role of assessment (not testing) in student learning and the recognition that only knowledgeable teachers can provide that judgment, understanding and then consequent practice (Roschewski, 2004). Rather than being the problem of schooling, teachers are seen as the solution.

In order to be in compliance with federal regulations, Nebraska educators developed academic standards for all subject areas and required each school district to identify local plans to provide curricula to enable students to meet the standards (Christensen, 2001). State Superintendent of Education Douglas Christensen explained,

> Ours is a bottom-up model. It begins in the classroom with instruction that's aligned to our standards and extends to assessments developed locally that are tied to how well students apply concepts and problem solve, rather than simply memorize facts and figures and dates that they can't remember 10 minutes later (Steptoe, 2007).

Each district negotiates its systems of assessment among its personnel and informs the state department how these systems provide accurate and adequate measures of students' learning. Moreover, teachers are organized in teams in order to evaluate the effectiveness of instructional practices and to search for new methods to reach students who need more help. In many districts, these teams are interdisciplinary enabling teachers to collaborate across specialties and the meetings times are incorporated into the instructional day. In order to build teachers' capacity, the state and local districts commit resources to professional development, bringing new ideas and practices before local teachers. "What we've got that no one else has is a cadre of teachers in the state who are as assessment literate as any educators on the face of the earth," Christensen says. "They know how to teach to an outcome, to measure the outcome with high technical quality, and they know how to use that information to improve instruction."

According to the *Comprehensive Evaluation Project*, the Nebraska approach changes the locus of authority, but not the goals of the quest for certainty (Gallagher, 2007). Where the technological model substituted standardization for participant knowledge and practice, the engagement model fosters a shared responsibility ethic in which flexibility, problem solving and leadership are expected and practiced. Rather than artificially reducing the complexities of school in order to fit technological limits, the

participants embrace the complexities of changing demands of diversity and globalization. In these ways, Nebraska schools and teachers demonstrate the skill set of the 21st century workers as well as present them to their students. And their participation in the decisions that affect their lives displays what it means to be citizens in a democracy as well.

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APPENDIX B: THE CURRICULUM CONTEXT IN QUEENSLAND

In defining the curriculum context in Queensland, consideration needs to be given to:

- Early Years Curriculum Guidelines;
- Queensland Curriculum, Assessment and Reporting framework (QCAR);
- Queensland Comparable Assessment Tasks (QCATs);
- Queensland Certificate of Education (QCE);
- Review of the syllabuses for the senior phase of learning;
- National agenda of consistency through National Curriculum;
- National testing and benchmarking processes;

Early Years Curriculum Guidelines

The *Early Years Curriculum Guidelines (EYCG)* was introduced in 2007. The guidelines aim to provide for continuity of learning through the early childhood phase of schooling by integrating planning, teaching and learning, assessment and reporting across the early years of schooling. So while the *EYCG* has been developed specifically for the State's new Preparatory Year, the document provides a framework for learning from Preparatory to Year 3.

There are five key components which act as the foundation of the framework. These include: understanding children, establishing partnerships, identifying contexts for learning, establishing flexible learning environments and the five early learning areas. An interactive process for collaborative curriculum decision making is described which identifies four phases for describing children's learning and development. The early learning areas - social and personal learning; health and physical learning; language learning and communication; early mathematical understandings; and active learning processes - work to connect children's prior learning with the learning engaged within the Preparatory year and the school curriculum beyond ([2]QSA, 2006).

Facilitating successful transition between pre-compulsory and compulsory educational settings is a key focus of the Preparatory year. Learning statements within the EYCG focus teacher planning and support teacher judgments about the particular phases in which a child is operating. This continuum is based on a sociocultural model, that

enables teachers to determine a child's readiness for Year One. Monitoring and assessing in the Preparatory Year includes gathering evidence over time; organising the evidence in individual folios and interpreting this evidence; and recording evidence using an 'early learning record'. There is an expectation that early learning records will be completed at least twice each year ([2]QSA, 2006).

Queensland Curriculum Assessment and Reporting (QCAR) Framework.

The purpose of the QCAR Framework to be implemented in all Queensland schools in 2008 for Years 1 to 9 is to promote alignment of curriculum, assessment and reporting. The QCAR Framework demonstrates how the elements of curriculum (Essential Learnings and Standards) and assessment work together to promote improved student learning through the Assessment Bank, Queensland Comparable Assessment Tasks (QCATs) and the Reporting Framework.

Essential Learnings for each key learning area (KLA) are organised around *Knowledge and understanding* (key concepts, facts, procedures) and *Ways of working* (processes that support the development of deep understanding and capabilities needed for ongoing learning). These statements of intent outline what most students are expected to achieve by the end of year-level junctures in Years 3, 5, 7 and 9. ([4]QSA (QCAR), February 2007).

Central to the QCAR Framework is the development of standards. Teachers use these Standards for making judgments about the quality and progress of student learning evidenced by school-based and state-wide assessments. They are also used for reporting on evidence gathered within a period of time ([5]QSA (QCAR), April 2007). Standards include the dimensions of Ways of working and Knowledge and understanding. They describe five reference points (A–E) at the end of the Essential Learning year-level junctures.

Queensland Comparable Assessment Tasks (QCAT)

From 2009 QCATs will be implemented by schools in Years 4, 6 and 9 in the key learning areas of English, Mathematics and Science. A fourth area to be targeted within the QCAT framework is yet to be determined ([8]QSA (QCAR), unpublished 2007). All Queensland schools, both government and non-government, are expected to participate.

Education Queensland schools will be required to participate in centrally-devised assessment tasks, developed by the QSA. Non-state schools will have the option of using school-devised assessment tasks, developed by individual schools or clusters of schools and endorsed by the QSA as an alternative to the QCATs. However, school-devised assessment tasks will be trialed by non-state schools and some state schools in 2008.

QCATs are designed to be authentic performance-based assessment tasks that allow students to demonstrate their breadth and depth of understanding in a selection of the Essential Learnings. Students will complete these tasks under common conditions. To implement the tasks, teachers will receive packages that include a guide to making judgments, administration guidelines and sample student responses.

The QCAT has three purposes: to model quality assessment, to provide schools with school based data to improve the teaching and learning process and to improve the consistency of teacher judgments across the state. This data will be collected by teachers in their own schools as they mark, judge and record individual student achievement. The task will provide teachers and schools with rich information to inform future teaching and learning decisions. Summary data will be forwarded to the QSA for accountability and aggregate data will be made available to all schools via a retrospective report.

Queensland Certificate of Education (QCE)

Legislation (Education (General Provisions) Act 2006), based on the actions in the *Education and Training Reforms for the Future (white paper)*, requires young people to complete Year 12 or its equivalent from 2006. The QCE provides opportunities for senior students to choose flexible and diverse pathways from school to work, training and further education. From 2008, the QCE replaces the existing Senior Certificate. The QCE is a school-based qualification based on the achievement of a significant amount of learning at a set standard and includes literacy and numeracy requirements. It is awarded to young people at the completion of the senior phase of learning when they have acquired at least 20 credits. A credit is the common currency for calculating the contribution of a broad range of learning to the QCE. At least 12 of these required 20 credits must be gained from completed core courses of study, and up to 8 credits may be

achieved from other core courses of study (e.g. authority, authority-registered subjects), preparatory courses (e.g. *Get Set For Work*, QSA literacy and numeracy short courses), enrichment courses (e.g. AMEB Grade 6 piano) and/or advanced courses of study (e.g. university subjects) ([1]QSA, 2005).

Legislation requires all Queensland schools to register students within one year before turning 16. Once registered, the QSA opens a learning account for students that records results achieved during the senior phase of learning. A Senior Education and Training Plan (SET Plan) is required for Education Queensland schools and is completed by Year 10 students with their parents and school. The plan maps what a student intends to study in the senior phase. Year 10 is often regarded as a transition year that prepares young people for the Senior Phase of Learning. Opportunities may exist for some young people to bank achievements during this year as part of accelerated learning in Year 10 or as part of a reengagement strategy ([1]QSA, 2005).

Review of Queensland Studies Authority Syllabuses for the Senior Phase of Learning

A review of syllabuses for the senior phase of learning commenced in 2005. The review highlights some key issues, including the role, status and differences in expectation between Authority and Authority-registered subjects; the need for flexible study options that enable multiple post-school pathways; and the connection between Year 10 and Year 11 ([7]QSA, October 2007).

The review will recommend a framework within which syllabuses for the senior phase of learning, Years 10 – 12, can be developed. The recommendations focus on establishing a foundation in knowledge, skills and general capabilities through a disciplinary approach to learning. They set out a way to provide learning options for a diverse student cohort that include a range of post-school pathways and flexibilities enabled by the Queensland Certificate of Education.

The proposed syllabus design is based on a core and elective approach. The core focuses on essential knowledge, understandings, processes and generic capabilities. The framework includes three types of elective: specialist elective, disciplinary and trans-disciplinary extension. Specialist electives provide the scope and sequence of learning

and enable development of a range of learning programs. Extension electives provide an option for independent study within a disciplinary area or across disciplinary areas.

The review recommends that the learning in the senior phase is grouped into 12 domains: English, Mathematics, The Sciences, Health and Physical and Personal Development Education, History, Environmental and Geographical Studies, The Human and Social Sciences, The Arts, Design and Industrial Technology, Business Studies, Information Technology and Languages other than English ([7]QSA, October 2007). The domains link with the key learning area syllabuses to form a Preparatory to Year 12 curriculum.

The National Agenda

The States, Territories and the Commonwealth have worked together over the last decade to put in place a number of agreements for a national curriculum framework:

The 1999 Adelaide Declaration on National Goals of Schooling in the Twenty-first century (MCEETYA, www.mceetya.edu.au/mceetya/nationalgoals/natgoals.htm, 22/10/07). This statement outlines agreement on eight key learning areas, a socially just approach, and the talents and capacities that all students should have when they leave school.

The National Statements of Learning in English, mathematics, science, civics and citizenship and information, communication and technologies (MCEETYA, www.mceetya.edu.au/mceetya/the_statements_of_learning, 11893.html, 19/10/07). These describe essential skills, knowledge, understandings and capacities that all young Australians should have the opportunity to learn by the end of Years 3, 5, 7 and 9. It was agreed by States and Territories that these would be addressed and incorporated into syllabus and curriculum documents that underpin learning programs in government and non-government schools by January 2008. These are embedded in the QCAR Essential Learnings.

Opportunities to develop national curricula have also been identified in a number of reports:

The *Year 12 Curriculum Content and Standards* report identified a high degree of national curriculum consistency between core curriculum in senior secondary subjects,

particularly in mathematics and the sciences (Matters and Masters, 2007). The report also revealed a high degree of correlation between curriculum experts on what should be taught in these subjects.

The *Quality of school education* by the Australian Government (The Senate, Sept 2007) reinforced the need for a comparable Year 12 curriculum, common standards and expectations of achievement. The inquiry recommended a significant component of external examination. While the federal opposition position supports a high quality, rigorous national curriculum across all States and Territories, it does not concur that compulsory external examinations will improve outcomes or curriculum rigor. The 2007 – 08 budget committed $14.5 million over three years (2008 – 2010) to trialling the use of aptitude tests by universities as an alternative or supplementary assessment method to tertiary entrance scores (DEST, www.dest.gov.au/NR/rdonlyres/B6A3BCF3-B79F-444E-BE53-99E6B4A09558/16427/070708PBSDEST Outcome4.pdf). This puts pressure on Queensland's school-based assessment.

A report by the Council for the Australian Federation, *Federalist Paper 2: The Future of Schooling in Australia* (CAF, Sept 2007) has a different view to national curriculum. The fourteen action plan in the report highlights the need for set core content and achievement standards. However, in moving towards a national curriculum it argues that there needs to be flexibility for states and schools to innovate and adapt what approaches achieve the best results. The report claims that whatever common curriculum standards are adopted, it will be important to allow for jurisdiction flexibility in applying these standards to different groups of students.

Other national documents impacting on national curriculum include:

Guide to the Teaching of Australian History in Years 9 and 10 (released 2007)

National education and the arts statement (released 2006)

National Statement for Languages Education in Australian Schools (2005 – 2008) (released 2005).

National Testing

The introduction of an ongoing National Assessment Program monitors progress towards national curricula. This program of national testing includes agreed assessments

identified in the Measurement Framework for National Key Performance Measures. These measures provide nationally comparable performance data to monitor progress against the National Goals for Schooling in the Twenty-First Century (MCEETYA, www.mceetya.edu.au/verve/_resources/2007_National_Measurement_Framework.pdf, 18/10/07).

The National Assessment Program comprises sample national assessments and annual literacy and numeracy tests. MCEETYA conducts national sample assessments in Science literacy (Year 6) and Civics and Citizenship and Information and Communication Technology literacy (Years 6 and 10). In May 2008, the first annual literacy and numeracy tests will be undertaken by all students in Years 3, 5, 7 and 9 in all States and Territories. These tests will measure how Australian schools and students are performing in the areas of reading, writing, spelling and numeracy. Results from these tests will be used for individual student reporting to parents, school reporting to their communities, and aggregate reporting by States and Territories against national standards (Curriculum Corporation, www.curriculum.edu.au/ccsite/default.asp?id=19875 , 18/10/2007).

Australia also participates in the Programme for International Student Assessment (PISA) and the Trends in International and Mathematics Science Study (TIMSS). Every three years, the Organisation for Economic Corporation and Development (OECD) administers PISA to a sample of 15 year olds. It assesses the extent to which students near the end of compulsory education have acquired some of the knowledge and skills essential for full participation in society. Every four years, the International Association for the Evaluation of Educational Achievement (IEA) administers TIMSS to a sample of Year 4 and 8 students and assesses trends in students' mathematics and science achievements (MCEETYA, www.mceetya.edu.au/mceetya/national assessment_program_(nap),16358.html, 18/10/2007).

AN AUDIT OF CURRENT QUEENSLAND STUDIES AUTHORITY SYLLABUS DOCUMENTS

### Current textual state of the 1-10 syllabus documents.

School-based curriculum planning and central syllabus design for years 1-10 in the state of Queensland are organised under the structure set out within the Years 1–10

Curriculum Framework for Education Queensland Schools (The State of Queensland, 2001). This document sets out details of core learning outcomes and their relevance to school curriculum planning, pedagogy, assessment and reporting. While certain schools may opt to implement The New Basics Framework in its entirety as a framework for curriculum planning, the KLA Curriculum Framework foregrounds curriculum development via an outcomes approach, across eight Key Learning Areas (KLA). These are English, LOTE, Mathematics, Science, SOSE, HPE, the Arts and Technology. There are seven current KLA syllabus documents, published in the period 1999 to 2004, and one syllabus (English) that remains in draft (2005).

The outcomes approach to curriculum assumes that effective syllabus design scopes and sequences learning outcomes rather than the prescribed content. Differentiation in curriculum planning is achieved because learners develop and demonstrate learning outcomes at one level before moving to the next level and as such are not constrained by the need to cover expected learnings at a year-specific rate (http://www.qsa.qld.edu.au/ date accessed 10 September, 2007). Curriculum planning focuses is on learners demonstrating learning outcomes rather than on content and prescribed scope and sequence. In this way learning outcomes determine the nature of curriculum inputs rather than the reverse. Differentiation in curriculum planning is achieved because learners develop and demonstrate learning outcomes at one level before moving to the next level and as such are not constrained by the need to cover expected learnings at a year-specific rate (http://www.qsa.qld.edu.au/ date accessed 10 September, 2007).

KLA Syllabus documents currently demonstrate how study in the specific discipline will contribute to life long learning by linking to Overall Learning Outcomes and more specifically to Key Learning Area Outcomes. Table 1 represents the common framework of KLA syllabus documents in Queensland.

Table 1: Framework of Learning Outcomes and Level Statements as they relate to Key Learning Area Outcomes and Overall Learning Outcomes.
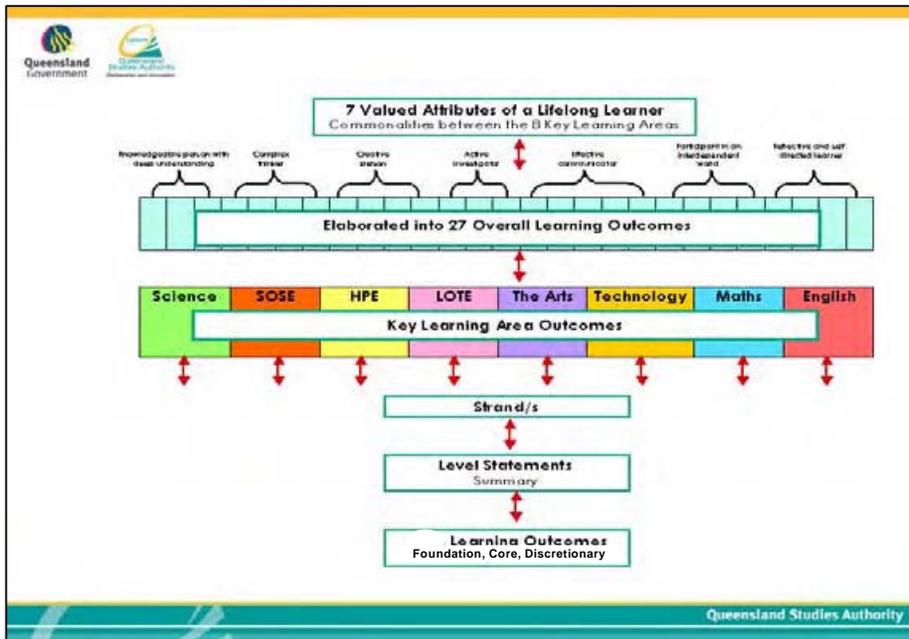
The majority of year 1-10 syllabuses are organised in strands. These strands serve to provide a framework for level statements and learning outcomes (Foundation, Core and Discretionary). Each document typically also provides details of the relationship between outcome levels and school year levels and indicative time allocations.

The Key Learning Area outcomes describe the outcomes to be demonstrated after ten years of learning in the Key Learning Area. They highlight the uniqueness of the key learning area. Core learning outcomes describe learnings that are considered necessary for all students across ten years of study. They are written to describe what students know and can do with what they know, and are presented in order of increasing difficulty from Level 1 to Level 6. Sample learning outcomes for Foundation level are described, to support teachers planning for children with special needs, who are yet demonstrated Level 1 Core learning outcomes. Learning outcomes from each level are conceptually related to each other, so that they form a continuum of learning. QSA documents discuss the embeddedness or 'nesting' of one level in those that follow. The approach suggests students should be provided with a range of contexts over time to demonstrate these outcomes. Discretionary learning outcomes describe learnings that are considered beyond essential and can thus be used to challenge or broaden students' understandings.

The syllabus support material provides elaborations which are designed to assist teachers understand the intent of the syllabus and the core learning outcomes. The Elaborations describe what students are expected to know and provide examples of what students might actually do when demonstrating their learning. Sample contexts are often provided as examples of ways in which learning can be developed. The QSA syllabus documents and support materials also typically provide information on planning using leaning outcomes and level statements, cross curricular priorities (literacy, numeracy, lifeskills and a future's perspective) and details of assessment.

In addition to the KLA syllabuses, the Queensland Studies Authority distributed subject area syllabuses and guidelines (SAS&Gs) early in 2005. Subject area syllabuses and guidelines were developed in five subject areas: Agricultural Education, Business Education, Home Economics Education, Industrial Technology and Design Education, Information and Communication Technology Education. These SAS&Gs are based on an outcomes approach and contain learning outcomes for Levels 4 to Beyond Level 6. Some of the learning outcomes come from key learning area syllabuses, while others are unique and characterise the particular subject area. They are provided to schools as a way to provide guidance for teaching and learning within subject areas that are typically a focus of curriculum choice and specialisation in middle and lower secondary years. It is expected that they will be used to develop specialised courses of study for students within this phase of schooling.

There is variety of scope and volume between the KLA syllabus documents in relation to the amount of detail provided within the syllabus and that provided in other resource materials. However while there is not consistency, each syllabus is generally front loaded with a rationale for the KLA syllabus content which contains information on the: nature of the Key Learning Area; contribution of the key learning area to lifelong learning; links to cross-curricular priorities; understandings about learners and learning. Mathematics, the Arts, Technology and SOSE also include details of equity in the curriculum.

The published syllabuses consistently include a rationale, a scope and sequence of Core Learning Outcomes, and a brief section on Assessment. The syllabus template varies in the level of detail depending on the time of publication and the publishing authority. Typically, syllabuses also contain advice about using outcomes for planning and

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assessment, a statement identifying the relationship between outcome levels and year levels, and indicative time allocations. One area where there are notable differences between the documents is in the detailing of core content. The Open Trial English Syllabus (2005), which is the latest document to be written (currently being redrafted) represents a trend toward providing much more detail and specificity in relation to content. In this document level specific content is provided after each outcome as a way of establishing direct relationships to 'what needs to be taught'.

Possibly the increase in level of specificity evident in the latest version of the English syllabus represents a perceived call for more content detail in syllabus documents, and a year-by-year approach to syllabus documents instead of current design practice which works to present outcomes at junctures. When interviewed QSA staff suggested the possible need to supply a scope and sequence chart of core content and sub-skill specification for English and Mathematics at least. However as this possibility was discussed a realisation of the implications for this became apparent. Syllabus documents need to be self contained and to allow for differentiation at local levels based on teacher professionalism and local and contextual knowledge. While examples of scope and sequence with increased levels of specificity might be provided as additional resources, it is not the role of syllabus documents to provide more details than a sequence of essential learnings as demonstrated at key junctures. The syllabus documents should not be compensatory documents for perceived lack in implementation professional development or as a way to build teacher capacity.

The current status of suite of year 11 & 12 QSA Syllabuses

The Senior Syllabus Framework is based on the premise that "Syllabuses approved by the Authority present broad frameworks of subjects but do not prescribe details." ([6]QSA 2006a, p. 33). There are four major categories of Senior Syllabuses that are developed and maintained by the Office of the Queensland Studies Authority (the number of syllabuses in brackets is at 2006)

Authority syllabuses (59)

These are syllabuses developed for implementation in senior schools, successful completion of which results in the award of a level of achievement for the Queensland Certificate of Education in an Authority subject and contributes to a student's Overall Position (OP) and Field Positions (FPs) ([6]QSA, 2006a, p. 1).

Study Area Specifications (16)

A syllabus that is developed and revised for implementation in senior schools the completion of which results in the award of a level of achievement for the Queensland Certificate of Education in an Authority-registered subject and may also result in the award of a VET certificate ([6]QSA, 2006b, p. 1). These syllabuses provide access to 29 Authority-registered subjects and 25 VET certificates.

Extension syllabuses (6)

A syllabus developed for implementation in senior schools over a single year of study that results in the award of a level of achievement for the Queensland Certificate of Education in an Authority extension subject and contributes to a student's Overall Position (OP) and Field Positions (FPs) ([6]QSA, 2006c, p. 1).

Syllabuses for the Senior External Examination (15)

The QSA has 15 syllabuses, derived from the internal syllabuses and adapted for assessment based on an external public examination during October and November each year. These syllabuses have been developed primarily for adults returning to study and part-time study. The courses of study developed from these syllabuses are generally undertaken over one year. Assessment of candidate achievement is based solely on demonstrated achievement in examinations set and assessed by the QSA.

Senior syllabuses are currently developed within the following framework:

Rationale:

This provides justification for including the subject in the curriculum by: defining the subject, outlining its characteristics and properties; and stating how these contribute to the education of students

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Global aims:

Statements of the long-term achievements, attitudes and values that are to be developed by students studying the subject but are not directly assessed by the school.

General objectives:

These are intended to be pursued directly by the school and student achievement of these is assessed by the school. They are set out under sub-headers that include Process, Content, Skill and Affective objectives. Classification of general objectives may vary between syllabuses. All have a section that reflects attitudes and values (affective objectives).

Organisation:

The syllabus provides the following information about the course of study: subject matter, units, topics, themes, etc. around which the subject may be organised; core requirements; the minimum number of hours that a course of study entails; and organisational principles for, or ways of, constructing work programs

Learning Experiences:

These are activities and/or tasks conducted within appropriate contexts which contribute to student development as outlined in the global aims and general objectives. Understandings about learners and learning are not specifically identified.

Assessment:

The Authority's principles of assessment are stated in each syllabus. The syllabus also contains statements about the following assessment components: assessment techniques suited to the judgment of student achievement; summative assessment criteria; standards for each exit level of achievement; ways of deriving exit levels of achievement; and requirements for verification folios

Language education:

The Authority's policy on language education is expected to be integrated into all aspects of a syllabus.

Quantitative concepts and skills:

The Authority's policy on quantitative concepts and skills is expected to be integrated into all aspects of a syllabus.

Educational Equity:

An equity statement is included in the syllabus for guidance.

Resource material:

A list of resources is included.

The educational criteria for Authority subjects that are to be addressed at all stages of development are appended to the document *Development and Approval Processes for QSA Syllabuses* (see [6]QSA, 2006a, p. 37).

Syllabus Review Process

Each syllabus is reviewed every six years by the relevant syllabus advisory committee (SAC). For syllabuses with embedded VET components the review occurs every four years. A review recommends one of four options: no change required; minor changes requiring no trial-pilot; major changes needing combined trialling-piloting (and possible professional development for teachers to implement the syllabus); or new syllabus. ([6]QSA, 2006d, p. 4).

A new syllabus or the revision of a syllabus may be proposed by SACs, schools, school systems, authorities and other institutions. All proposals for new syllabuses are evaluated for the QSA by the P-12 Curriculum Committee. Accepted proposals require its originators to develop the syllabus in conjunction with a SAC or a special committee may be formed ([6]QSA, 2006a, p. 5). Once accepted, a proposed new syllabus is advertised for trialling. If a major revision of a syllabus is accepted it is advertised for combined trialling-piloting (25-50 schools needed).

An overview of the development and review process for senior syllabuses is illustrated below (adapted from [6]QSA 2006a, p. 8). The roles of the various stakeholders are detailed in the same document.
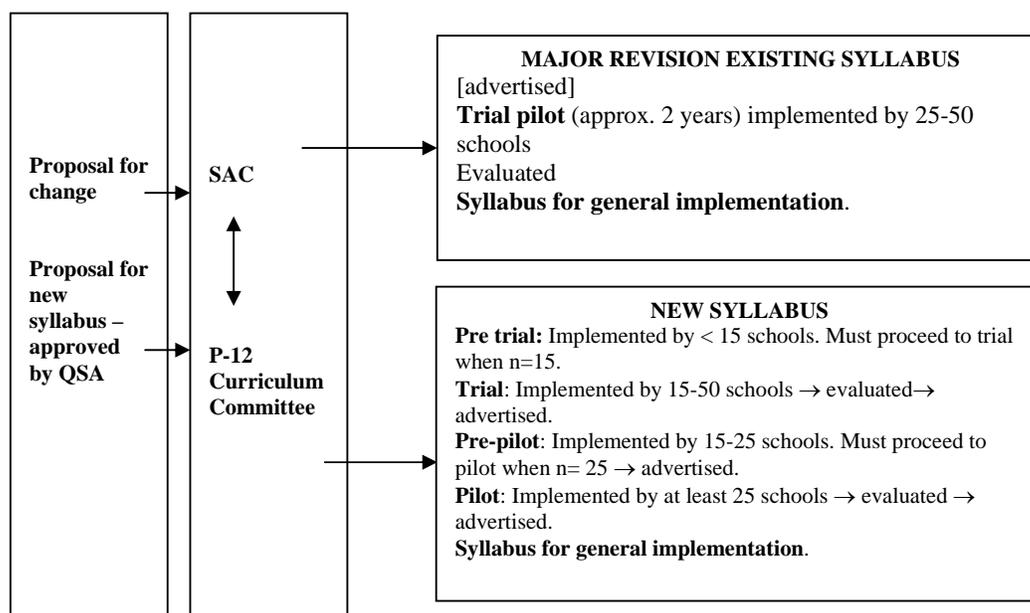
Figure 2: The curriculum review process for curriculum documents

According to the [9]QSA (2006a, p. 12) the cycle of revision of syllabuses begins early Year 3 of implementation of the current syllabus when the SAC conducts a literature review; an analysis of interstate and overseas syllabuses; and a survey of schools, tertiary institutions, industry and businesses, subject associations and other interested parties. There is a relatively short timeframe between this phase and the production of the substantial draft of the syllabus being released to schools in Term 4 of the following year. This draft is based on the earlier survey findings and literature review incorporated in the plan of action presented to the Curriculum Committee. The final drafts of the syllabuses are presented to the Curriculum Committee and approved by the Authority in November of the third year and are prepared for the QSA website in February of the fourth year after the revision process began.

The *Catalogue of Senior Syllabuses for Authority and Authority-registered Subjects for2007*, (QSA, 2007) which lists the syllabuses approved for use in senior secondary schools, indicates that this cyclical revision cannot fulfil these tight timelines. The catalogue updated annually shows the Authority subjects that are currently operating from an outdated syllabus document, e.g., Chemistry and Physics (1995); Multi-Strand Science (1998); Agricultural Science (1999). QSA's accommodation of decisions made by external bodies has meant that these timelines for cyclical revision are not always

able to be achieved. Examples are (i) delays or sudden changes to the national training packages for VET certificates, which affected the Agricultural Science syllabus; (ii) government initiatives, one of which has lead to the development of the trial Science21 syllabus of which the evaluation will guide the outcome for Multi-Strand Science.

The content and underpinning ideas about knowledge, learning, pedagogy and assessment is the focus of the next section which looks at the research commissioned by the QSA to analyse the current suite of senior offerings in Queensland.

REVIEW OF SIGNIFICANT RESEARCH COMMISSIONED BY QSA FOR THE YEARS 11 AND 12 SYLLABUS REVIEW

In response to a new set of imperatives acting on senior schooling, the Queensland Studies Authority began a review of syllabuses for the senior phase of learning in June 2005. The proposed 'blueprint' for senior syllabus design is centred increased student retention to the end of Year 12 and maintains Queensland's current approaches to the senior phase of learning including school-based curriculum planning and assessment, the Queensland Certificate of Education (QCE), and the outcomes of the Education and Training Reforms for the Future (ETRF) initiative. According to the [10]QSA (2006g), the proposal for future syllabus development is based on four principles:

- coherence by clustering existing syllabi into fields of learning;
- rigour through syllabus rationale that clearly explicate the underpinning ideas around learning, teaching and assessment and about the development of generic skills or capabilities;
- flexibility so senior students can access different post-schooling pathways; and
- connections to Year 10 learning outcomes and post-schooling options.

The broad frame of reference for the review of senior syllabus design and offerings was constructed from consultation across Queensland communities as well as commissioned research. The following is a review of the most significant research reports and discussion papers conducted for the review. Included in this review are three analyses of the current suite of QSA senior syllabuses, each taking a different lens to scope, content and quality, as well as some aspects of syllabus implementation. Also mentioned in the following review is a discussion paper that examines the positioning of Year 10 as a

bridging year to the senior phase of learning. Whilst not directly implicated in the development of new senior syllabuses, this report informs the principle of connectedness that underpins the review.

To obtain an external perspective on Queensland's senior syllabuses, the QSA commissioned David T. Conley from the University of Oregon for comment and judgement based his own critical educational standpoint rather than a narrowly defined academic review based on the literature. Conley (2005) reports on "desk audit" of senior Authority syllabuses, assessing the content and quality of these as documents that specify requirements for the curriculum to be delivered by schools. The focus for Conley is on how the syllabuses construct and define learning and how well they map the domain of knowledge and skills that senior secondary school students might be offered for completion of secondary school and a foundation for embarking on their post-school pathways. (p.2) Authority syllabuses for Conley,

> are clearly those that have been designed with university preparation in mind, that is, with an orientation towards providing students with intellectual support for embarking successfully on university studies. All of these syllabuses provide models for intellectual enquiry and offer substantial cognitive challenge (p.2)

The findings outlined in Conley's (2005) report are expanded on and more clearly framed through Gilbert & MacLeod's (2006) analysis which includes Subject Area Specifications (SASs) in their audit of senior syllabuses. This research assessed the extent to which senior syllabuses prepare students for the demands of post-schooling pathways. Whereas Conley's focus is on how well the knowledges and skills offered to students undertaking more 'academic' pathways prepare students for university, Gilbert and Macleod analyse the alignment between senior syllabuses and broader post-schooling pathways in terms of a set of generic 'capabilities' drawn from current literature and research.

In contrast to these two reports, Freebody (2006) probes the multi-functionality of schooling how this links with senior syllabus design. The aim of Freebody's work is to inform discussion about the contents and organisation of senior syllabuses in order to improve their capacity to square up to contemporary and general expectations of schooling.

Also included in this review is a brief commentary on the findings from Nayler and Tunstall's (2007) research which examines how Year 10 should be positioned in light of the review of the senior phase of schooling and other systemic educational imperatives that impact on Year 10, e.g., the implementation of the QCAR framework in Years 1-9.

Report Findings

Conley's (2005) report findings identify a number of strengths in the Queensland suite of senior syllabuses and they also highlight some issues and challenges for the QSA in terms of its role in the development and review process and its approach to knowledge construction and ideas about learning.

Conley reports that a particular strength of the syllabuses is their general similarity in overall structure and expected content. He explains that the current format and main elements do an excellent job of capturing the information that is necessary for successful course planning, instruction, and assessment. This, he suggests, creates the ability for teachers to talk with one another and, conceivably, for schools to plan their entire program of study in a coherent, integrated fashion designed to address the General Objectives. (p. 18)

Another strength of the QSA syllabuses is their emphasis on processes as a means to achieve deep understandings and applications of worthwhile content. Conley claims that as a generalisation, the QSA syllabuses may best be thought of as development-oriented, not mastery-oriented as the espoused model for syllabuses seems to be based on utilizing core content to develop greater capacity in areas delineated by the General Objectives. (p.15)

Conley's findings in relation to the organisational scheme of the syllabuses indicate problems associated with the "building block" approach to learning. He suggests that this approach assumes that each unit of learning stands relatively separate from the others (with a few notable exceptions where prerequisite learning is critical). He simplifies this finding stating that "[The] whole is not any greater than the sum of the parts. In fact, the whole is strictly computed to be the sum of the parts." (pp.5-6)

According to Conley, basing syllabuses around traditional conceptions of knowledge and its organization creates other problems. Firstly he finds the syllabuses do not make demands on students to engage in the community actively or explicitly as a component

of their education (p. 10). A second area of concern is that connecting students leaning with society and broader social issues does not seem to be a strong point in any of the syllabuses (p. 16). A third issue for Conley is that there is limited evidence that the syllabuses draw upon technology in any sort of cutting-edge manner which sends the message that technology is not central to learning (p 16). A fourth and final challenge for senior syllabus design is the lack of inclusion of new and emerging 21st century skills (e.g., entrepreneurship) which are, in the main, overlooked in the current suite.

Conley's findings are supported by Gilbert and Macleod's (2006) research which shows a relatively consistent emphasis on basic content, communication and thinking skills and deep learning. They suggest that syllabuses do not show alignment with developments in post-school learning environments which index independent learning, especially in the use of information and communication technologies, and metacognitive approaches as important student attributes. The authors point to the emphasis on 'subject matter' coming at the expense of generic processes and employability skills. Furthermore, the authors were surprised by the finding that employment skills and knowledge are not a feature of the Subject Area Specification syllabuses that are designed for students undertaking a vocational education course of study.

Gilbert and Macleod also uncovered an issue concerning the considerable areas of choice in most syllabuses and SASs, in learning experiences, unit topics (some have core and elective whilst others exist as a list of electives) and in the number/scope of electives. They claim that this situation makes identifying which units should be counted as contributing to the 'preparation' of the students is very difficult(p. 31). Additionally, the way choice was represented through language also varied across syllabuses, especially language used to recommend the importance of various options (e.g., 'recommended', 'possible' or 'suggested'). The main recommendation from Gilbert and Macleod's research is that "[A] focus on performative outcomes would imply much clearer guidance on important learning experiences." (p. 32).

Conley, on the other hand, has a number of recommendations for the QSA with respect to syllabus development. He suggests that the current set of syllabuses needs to be reviewed and reorganized at least at the level of determining what is being taught collectively (p. 7). He makes one very basic recommendation to install a core set of

studies to help ensure all students had mastered key content and that schools could be expected to offer high quality instruction in a set of courses. In support of this claim Conley argues that although generalization may not meet the needs of all students, such an approach at least allows for greater quality control and for the creation of more opportunities for more students. He goes on to suggest that given the degree of uncertainty regarding which skills are most important for the future, it seems sensible to equip as many students as possible with as many foundational skills as possible.(p. 7)

Overriding his proposal about a core set of studies is a syllabus design process that is based on the interconnected nature of knowledge and acknowledges the blurring of disciplinary boundaries. Conley's suggestion in this regard is that the QSA should always operate all syllabus development from within a comprehensive framework of desired knowledge and skill outcomes so that each and every syllabus references the larger framework to ascertain what of importance is being included in the syllabus and how well the entire program of instruction addresses the constellation of desired outcomes (p. 15). Conley argues further that

> this approach can allow instruction to focus on fundamental "truths," enduring questions, emerging insights and issues, and key skills that permit students to succeed in any academic field or educational undertaking. The framework creates a space within which talented educators must engage students in challenging content and provocative interactions with a range of disciplinary knowledge. (p. 6)

Another recommendation concerns the syllabus development and review process which dose not appear to be evidence-based, that is it "lacks a strong R & D process" which, for Conley, can result in syllabuses being developed and modified based on the impressions of those on the [subject area] committees.

> While these individuals clearly possess high levels of knowledge and credibility, relying entirely on impressions rather than systematic, longitudinal data means that mistakes can be repeated or that, at the least, the development process is not systematically informed by data that enables progressive improvements each iteration. If the focus is on the content and the developers, the effects on a wide range of students is largely absent from the development process. (p. 12)

Conley states that the development process for Authority subjects needs to be informed by data from a variety of sources and should be compared to international standards of

quality and coverage. His findings also suggest a need for more formal mechanisms to evaluate the effectiveness of the syllabuses, either through longitudinal studies, predictive validity studies, or even more qualitative methods, such as interviews and surveys.

A final, significant recommendation in Conley's report is for the QSA to collect model curriculum and assessment units and post them centrally on a website so that the Authority can and should serve as a "best practices" clearinghouse among high schools in the state (p. 15). The author sees this as the missing link between the general guidance contained in the syllabus and the detailed lessons that teachers must generate to translate the generalities into activities in which students can engage. He suggests that because so many of the goals and objectives of the syllabuses are ambitious and complex, teachers may need help learning how to handle the more challenging aspects of the syllabuses (p. 15).

Conley concludes his report with a list of questions that provide a set of key principles to frame future syllabus design for the senior phase of schooling in Queensland. These principles are underpinned by the notion that all syllabuses should make stronger connection to career pathways, not either university preparation or job training (p. 21). His final proposal is that at least one General Objective in each syllabus address a set of generic work readiness skills to be developed by a panel of employers reflecting both current and emerging fields in the private and public sectors (p. 21).

In line with Conley's ideas about how senior syllabuses can better align with the general expectations of schooling Freebody's (2006) report simply states that "the primary justification for diversity in syllabus offerings is the qualitatively different worlds in which graduates of a society's schools will come to live and work." (p. 7). Freebody's findings support Conley's observation that learning is not connected across the senior school curriculum as one of the problems with the Queensland senior syllabuses is that they

> tend not to relate or refer to each other in their statements of organisation or rationale. Their logics and lexicons are subject-specific with few apparent similarities in the characterisation of knowledge or learning. As a suite they represent a collection code.

(p. 14)

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Freebody cites a different set of key principles for syllabus design based on research around the New Basics Project (see Matters, 2005) which proposes some "bottom-line" commitments to create syllabuses that are focused and uncluttered; fluid and responsive; ancient and modern; trans-disciplinary and disciplinary ; rigorous in assessment; 'valid in the real world'; comparable across different educational contexts; accountable; and successfully applicable across the entire system of schools intended to be served. (pp. 6-7)

Freebody frames his analysis of the senior syllabuses on the multi-functionality of schooling and argues that "there exists a primordial interplay that is central to generative discussion about syllabus design - that between the epistemic and pragmatic work a syllabus and a suite of syllabuses needs to afford students." (p. 8) Based on this premise Freebody explores the "deep grammar of syllabus", locating and discussing the four general kinds of rationales: epistemological, psychological, universalist, and social. (p. 8) The findings from his analysis show that senior syllabuses represent a mixture of all four of these justifications with some overt references to a social-utilitarian orientation in most syllabus documents. The main challenge, he suggests, is to make explicit the connections between epistemological, psychological, universalist, and social considerations, and any futures-oriented analysis of the conditions - economic, cultural, technological, civil, domestic - that may face students (p. 24).

Discussing syllabus formations at a micro-operational level, Freebody's findings concur with Conley's in that the current arrangements are of 'benefit' to teachers, school leaders, and central office policy makers because they are familiar and apparently manageable as bases for activity in classrooms, interactions with stakeholders and the development of high and low stakes assessment tasks. (p. 26) This supports the notion that syllabuses fulfil their role in terms of documents that can be translated into school work programs that meet accountability measures for exiting the senior phase of schooling.

A final comment on the three research papers cited in this review is the absence of an explanation about difference between a subject and a discipline. Freebody's report implies the relationship exists through the design of the syllabus in how it should cater for the nuances of different disciplines in term of allowing each discipline "the space and time to display its distinctive way of resolving the ongoing dialectic of, on the one

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hand, human agency and, on the other, material, biological, social and economic determinism - volition and coercion, "regimen" and "enterprise" - in people's daily lives. " (p. 22). This claim may apply to the role of the syllabus but does not provide insight into the distinction between school subjects and academic disciplines per se.

QSA's review of syllabuses in the senior phase of learning sits within a cluster of significant educational policy initiatives that have implications for possible future courses of study senior students will undertake as a result of the review process. Already mentioned is the ETRF policy which increased the compulsory school leaving age to 16 and makes it mandatory for students to be 'earning or learning' until they have completed Year 12 or equivalent. A clear implication of this reform is a requirement for the Government to provide more "flexible opportunities for 15-, 16- and 17-year-olds to achieve [the QCE] or vocational education qualifications" (The State of Queensland, 2002, p. 7). The senior school curriculum must therefore provide flexible and multiple pathways for learning that extend beyond secondary school boundaries.

Another reform with major implications for the senior phase of learning is the Queensland Curriculum, Assessment and Reporting (QCAR) framework that will be implemented in Years 1 through 9 in 2009. This major curriculum reform is shift from outcomes-based education to a standards-based framework and a new emphasis on 'essential' knowledges and skills. The QCAR framework effectively removes Year 10 from the middle phase of schooling and, combined with the ETRF changes, places Year 10 in a three-year senior phase of learning. What this new positioning of Year 10 means conceptually and organisationally for Education Queensland and the Queensland Studies Authority is explored in a report on research by Nayler and Tunstall (2007). From their research emerges a "preferred configuration" for the conceptual positioning of Year 10 within the P-12 curriculum with the following basic characteristics:

- as the beginning year of the Senior Phase of Learning that acts as a bridging year between the Middle Phase and Senior Phase
- that takes an "integrated + toolbox approach with specific teachings around disciplines and generic capabilities
- maintains low-stakes assessment (potential for portfolios of learning achieved)
- that raises the intellectual quality of Year 10 classrooms

- where some subjects are structured as prerequisites for courses of study in Years 11 and 12
- that consists of core domain learning + extension
- that maintains and improves school-based assessment practices
- where there is systemic support for social moderation of student work

The following table outlines Nayler and Tunstall's findings on some of the implications of this preferred configuration for the conceptual positioning of Year 10 for the QSA's review of senior syllabuses.

QSA reform focus	Implications of Year 10 as an integral component of the senior phase
Queensland Curriculum, Assessment and Reporting Framework Project	Syllabus materials need to reflect bridging* from the QCAR to the senior phase of learning. *The concept of bridging here relates to: making explicit (to the syllabus reader) the commonalities between the elements of QCAR and the reconceptualised senior phase of learning in terms of generic capabilities and so on making explicit (to the syllabus reader) the divergences between the elements of QCAR and the reconceptualised senior phase of learning, as well as justifying those differences providing for the scaffolding of students' movement from one phase to the next with the focus on permeability of entry to, and exit from, the senior phase of learning.
Review of the syllabuses for the senior phase of learning	Specific spaces need to be found in the Year 10 component of the senior phase curriculum to support students' reflection of their learnings in relation to essential learnings and standards. Specific spaces need to be found in the Year 10 component of the senior phase curriculum for students to undertake personal learning plans (see boxed section, SACE Review).

Table 2: Implications of Year 10 as an integral component of the senior phase
Nayler & Tunstall, 2007, p. 35

This brief review of Nayler and Tunstall's (2007) research findings indexes some of the issues for consideration for senior syllabus writers and points to the need for coherence across the school curriculum, especially at particular 'choke' points such as the transition to the senior phase. When the findings from this report are considered in light of the findings from the three previous reports reviewed, it seems apparent that the curriculum 'throughlines' (see Pinar, 2004) that provide this coherence are the generic skills that in future, need to be explicitly taught within each discipline. This represents a new elements of the senior syllabus framework which, if approached in a manner that 'makes sense' to senior teachers, will enable senior students to better see the curriculum as an interconnected whole rather than its current status as the sum of its parts.

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APPENDIX C: LITERATURE REVIEW

A REVIEW OF ACADEMIC LITERATURE ON SYLLABUS DESIGN AND IMPLEMENTATION

This section reviews how the syllabus is represented in the literature and how current research can inform this project. The academic literature around syllabus design and implementation emerges predominantly from two fields of study: English Language teaching and higher education sector in the USA. Each field views the syllabus from quite different perspectives and each differs in its depth of inquiry. However, the implied goal of the majority of research is methodological, with a focus on the 'how to' of syllabus design and implementation. The literature rarely probes the assumptions and ideologies that underpin the syllabus as a construct. A notable gap in the academic literature is a focus on design implications of the syllabus in the compulsory years of schooling. These general impressions of the literature on syllabus design and implementation are analysed in more detail in the review that follows.

Syllabus design and teaching English as a second or foreign language.

The syllabus literature that relates to research and scholarship in the field of English Language teaching originates from a corpus of general text books on the topic published during the 80s (see for example Brumfit, 1984; Crombie, 1985; Johnson, 1982; R. K. Johnson, 1989; Krahnke, 1987; Nunan, 1988; White, 1988). This reflects an era of renewed interest in teaching English as it was becoming an essential global language. Within the academy this also coincides with a paradigm shift in the teaching of English more generally towards a sociolinguistic model for understanding language acquisition and systemic functional linguistics and other applied linguistic approaches to English language teaching.

The substantial body of syllabus design literature that has emerged from this field since the 80s is narrowly defined by its focus on methodologies for teaching English in specified contexts. According to Nunan (1991) this is in part due to the significant influence language teachers themselves had on syllabus design and learning resources. The literature is therefore typified by the language-learning context in which the syllabus is to be implemented, and the syllabus appears to be represented in terms of a

pedagogical approach to teaching English within these contexts. Some of these English language teaching contexts that are specified in the literature include English as a second or foreign language (ESL or EFL respectively, e.g., Celce-Murcia, 2001), Teaching English as a second or other language (TESOL, e.g., Long & Crookes, 1992), English language teaching in its social context (e.g., Candlin & Mercer, 2001), English for specific purposes (ESP) which incorporates English for academic purposes and occupational purposes (EAP and EOP respectively, e.g., Bruce, 2005 and Flowerdew,2005).

In this context the syllabus is mainly represented as a pedagogical tool that prescribes a particular method for teaching English. The syllabus is described using a range of lexical descriptors that generally reflect the pedagogical approaches they represent. This discursive representation of the syllabus appears to have been initiated by Wilkins (1976) who created a superordinate classification of notional syllabus types labelling them 'analytic' and 'synthetic', terms that relate to the role of the learner in acquiring a language. Other syllabus types described in the literature reviewed include the *text-based* syllabus (Feez, 1998); the *task-based* syllabus (Long & Crookes, 1992, Flowerdew, 2005; Nunan, 1989); the *communicative* syllabus (Johnson, 1982); the *topic-based* syllabus (Bourke, 2006); the *negotiated* syllabus (Clarke, 1991) plus *negotiation and process* syllabuses (Breen & Littlejohn, 2000) to name a few. The same literature often discusses syllabi in more general educational terms with mention of cognitive, critical and integrated approaches to syllabus design.

During its emergence in the 80s some research began to probe more fundamental questions of about syllabus design. For example Breen's (1987a, 1987b) series of articles that examine the theoretical paradigms that frame syllabus design and Gray (1990) provides a discussion around the application of theory to syllabus design. Research by White (1988) attempts to unpack the relationship between syllabus and curriculum with the author suggesting these terms are contingent on culture. He explains the British usage of 'syllabus' refers to the scope and sequence of content or subject matter of an individual subject, whereas 'curriculum' "refers to the totality of content to be taught and aims to be realized within one school or educational system" (White 1988, p. 4). Thus, the British interpretation of these terms indicates the curriculum subsumes a syllabus. Apart from these earlier attempts to theorise the

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syllabus, the English language teaching field tends towards simplifying the syllabus as guide for teachers wanting to implement a particular approach to teaching English.

Syllabus design for teaching in higher education: the USA context

The other field of study that dominates the literature in syllabus design is the scholarship and practice around teaching in higher education institutions, mainly colleges and universities in the USA. The majority of this literature emanates from departments of instruction within faculties and the work tends to be presented as practical manuals or guides for writing syllabuses that align with institutional policies and which appear to have limited utility for a broader or more international audience (see for example Florida State University, nd; San Francisco State University, 2003; Slattery & Carlson, 2005; Walker, 2005). Some of the literature does outline detail regarding the underlying (mostly pedagogical) principles that frame the syllabus design (e.g., Grunert, 1997; Lang, 2006; Strada, 2006; University of Tennessee, 1998) but this literature is mostly concerned with outlining the main components of a syllabus. The other major research focus of the literature reviewed for this project is analyses of the purposes of a syllabus, (see for example, Hammons & Shock, 1994; Kellough, 1990; Parkes and Harris, 2002 ; Ussher, 1999; Zucker, 1992).

Doolitte and Lusk (2007) provide a more comprehensive review of previous research into syllabus design. Their work indicates that syllabus components and syllabus functionality are just two of three major themes addressed in the literature, with the third theme examining syllabus perceptions by faculty and students (see for example Marcis & Carr, 2003). Doolitte and Lusk's (2007) analysis concurs with this review's finding that the syllabus is an under theorised construct. They cite Cardozo's (2006) work which claims that "syllabus construction itself remains a significantly under theorized professional activity..." (p.412). Doolitte and Lusk's (2007) review mainly demonstrates considerable variability in the construction and uses of syllabi (p. 65) but no ongoing dialogue that goes beyond the basic elements and utility of the syllabus as a material artefact of the curriculum.

The scarcity of sustained inquiry around the syllabus seems incongruous considering its almost universal status as an educational tool. This situation is not new as indicated by Diamond (1998) who found that no substantial body of literature exists on the subject

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and who suggests that the syllabus is too prosaic for detailed research and that the value of a comprehensive syllabus is generally overlooked. This claim relates to the author's specific research finding that there is a prevalence of courses whose syllabuses do not reflect the broader curriculum intent (Diamond, 1998, p. 2). This result is supported by Habanek's (2005) study that analysed actual course syllabi and found inconsistencies between curriculum principles and how they are communicated through the syllabus. Habanek (2005) suggests this problem corrupts the assessment agreement that the syllabus represents.

Alignment issues between curriculum and syllabus and the paucity of deep discussion around the relationship between these two fundamental educational constructs may be due, in part, to curriculum theorising being a relatively new field of inquiry. Additionally, curriculum theory has, until recently, been narrowly conceived as the Tylerian rationale for curriculum development, a situation that seems to have been readily adopted by those working with the syllabus as a general course guide. The end results is that the relationship between a syllabus and its curriculum is not well understood nor is it discussed to any depth in contemporary literature and research except on occasion where its significance is integral for syllabus design. For example, when Habanek (2005) examines the "integrity of the syllabus", she views the syllabus as a permanent record of curriculum and "an agreement that specifies the accountability of the major players in the learning process" (p. 63). In his seminal work on curriculum development and design, Print (1993) presents a much broader description of the link between syllabus and curriculum at the same time acknowledging that the two entities are often confused. His idea is that the syllabus forms part of the overall curriculum and tends to be a list of content areas which will be assessed, whereas the curriculum is "...all the planned learning opportunities offered by the organisation to learners and the experiences learners encounter when the curriculum is implemented" (p.9). Interestingly, the link between syllabus and curriculum is discussed in some depth by Burton and MacDonald (2001), a pair of medical educators who identified semantic confusion between the two terms amongst practitioners and students of medicine. The results of their research show many in the medical fraternity simply equate curriculum and syllabus. The authors suggest that it is "[P]erhaps due to the ephemeral nature of the term 'curriculum', that this kind of mistake is a common one..." (p. 189), and propose that it may constrain thoughtful debate around curriculum reform. What

emerges, even from this limited dialogue, is that the syllabus is not viewed as a textual trace of the curriculum nor does the discussion extend to the implications' of understanding the syllabus as text or even as a discursive construct.

Aside from the paucity of intellectual dialogue that deconstructs the syllabus to any degree, the review of this body of literature highlights how the field of higher education tends to represent and explain the syllabus and its functions through a series of metaphors. According to Parkes and Harris (2002) the three most common metaphors employed in discussions around the syllabus are as a contract, a permanent record and as a resource for student learning. This literature review demonstrates a broader range of metaphors that index how a syllabus is devised and implemented. For example a number of writers see the primary role of a syllabus as a communication device (e.g. Habanek, 2005; Thompson, 2007) with Slattery and Carlson (2005) redefining it in terms of an "imperfect communication tool" to acknowledge it is somewhat constrained in this role. Another common metaphor utilised in the literature is the syllabus as a map (e.g., San Francisco State university, 2003; University of Tennessee, 1998) with an effective syllabus being "easy to navigate" (Slattery & Carlson, 2005). Green & Stortz (2006) take the idea of the syllabus as a journey to another level when they discuss the syllabus "as a passport" that enables a common culture of teaching and learning. These writers extend this metaphor and discuss their idea of a common classroom culture as the 'vessel' for navigating diversity. They discovered that the syllabus was the key for creating a shared and transparent common culture of teaching and learning. In contrast to these ideas, Strada (2001) sees the syllabus as a "creative catalyst" discussing how rigorous syllabi can provide cognitive maps that can broaden and deepen how teaching is evaluated in the academy. Strada (2001) then employs a medical metaphor to describe how the syllabus can be used to facilitate smooth delivery of courses in his statement of claims that suggests that fine syllabi also work as doses of preventive medicine bound to save us time and frustration in the future. While the metaphor is a useful tool for creating an image of what a syllabus is and what it does, it also can constrain the imagination in terms of deep, theoretical understandings concerning how syllabi are framed and what their unintended effects are in different educational contexts.

CONCLUSION

This review of the literature around syllabus design and implementation demonstrates that considerable research exists which focuses on various design models for creating a 'methodological' syllabus that acts as a window to a course plan. Additionally there is abundant writing on the purposes of a syllabus for a range of different educational contexts. However, the academic literature indexes a paucity of literature that probes the syllabus beneath its surface structure as the guiding document for teaching a course, and even rarer is research that outside of higher educational contexts for the role of the syllabus in teaching and learning. A potentially significant consequence of these oversights is that educational decisions around what to include in a course and how to deliver a course that aligns with curriculum intent are based on assumptions that still remain unquestioned. This project may make a step toward filling this gap at least in terms of beginning an important conversation that provides some insights into the sorts of questions we need to be asking of the syllabus if we are to make informed decisions about its design and function.

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