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Background, rationale and specifications:

**Queensland Curriculum,
Assessment and
Reporting Framework**

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This paper was prepared for the consideration of the Policy Steering Committee,
Queensland Curriculum, Assessment and Reporting Framework.

SECTION ONE: BACKGROUND AND RATIONALE

1 What does this project aim to do?

1.1 This project aims to improve teaching and learning and to extend teachers' knowledge and understanding of assessment practices and their relationship to students' learning in Queensland schools through the co-ordination of three tasks:

- increasing the focus on the essential capabilities that curriculum resources are intended to provide for students
- increasing the comparability of assessment and reporting across schools
- increasing the alignment of curriculum, assessment and reporting through the provision of standards of student achievement.

1.2 To plan and work on this project, a partnership has been formed that includes educators from the Department of Education and the Arts, the Queensland Catholic Education Commission, the Association of Independent Schools of Queensland, Education Queensland, and the Queensland Studies Authority¹. Members are listed in the Appendix.

2 What are the motivations and context for the project?

2.1 Queensland schools are in a strong position to work toward closer alignment of curriculum, assessment and reporting across the school year levels up to Year 10. This strong position arises from:

- a history of school-based assessment and, as a result, an awareness of issues concerning assessment and standards among school personnel
- the recent participation of many Queensland educators in a variety of innovative research, development and implementation initiatives that have addressed fundamental issues about teaching, learning and assessment
- the recent production of framework statements that have aimed to redirect educational practice and policy development for the state.

2.2 Taken together, these features of the recent history of education in Queensland have allowed many educators to re-examine how teaching and learning are done. This re-examination has involved asking serious questions about the future needs of young people, needs to do with rapid developments in communication and learning technologies, more complex and varied vocational and social pathways, the expansion of service — and information-based employment sectors, and rapidly evolving demographic and cultural formations.

- 2.3 These changes put distinctive pressures on individuals' learning capabilities and present challenges to schools and systems to foster these capabilities. This project represents an important next step toward meeting those challenges, in particular the need for:
- warrantable grounds for uncluttering the curriculum by nominating and exemplifying essential learning areas
 - focused and rigorous monitoring of learning
 - more common ground for informed dialogue between teachers and parents about students' achievements and progress
 - a clearer, more evidence-based sense among stakeholders, including government and the community at large, of the achievements of Queensland schooling.
- 2.4 The question '*what are the essential learnings that should come from education in schools or other institutions?*' is as old as educational debate. So the search for essential learnings is not a simple inquiry that can be pursued by naive means. Collecting the headings from current syllabus documents or from favoured theories of child and adolescent development, or general descriptors of cognitive processes, commonsensical statements about ethical or responsible behaviour, or job skills from a sample of employment sectors – all of these approaches rely on premises that come from distinct traditions of study and from competing notions of the purposes of schooling². That is, the nomination of essential learnings, capabilities, attitudes, dispositions, and the rest is not a simple process of describing what is self-evidently the case from a curricular, psychological, sociological, or philosophical point of view. It needs to be seen, therefore, as an intervention into educational practice, an assertion aimed at coordinating, refining or changing current practice.
- 2.5 With that interventionist motivation in mind, the following discussion describes the kinds of features that are desirable in school students by the end of Year 10, made available from the learning experiences with which they have been provided over their school years, and with regard to the different learning areas that embody knowledge, understanding, and skill currently operating in Queensland schools.
- 2.6 In summary, the project described here aims to focus and align curriculum, assessment and reporting in Queensland schools through an initiative motivated by a commitment to the concerted application of agreed standards of progression and quality in the conduct of regular, rigorous and comparable assessment.

3 What working principles underpin the project?

- 3.1 *A focus on professional consensus:* The aim of the Queensland Curriculum, Assessment and Reporting Framework is to take steps toward focusing, making more consistent, and making more closely related to intended curriculum, the wide range of teaching, assessment and reporting practices now evident in Queensland schools (as concluded variously in, for example, *New Basics Research Program*, *External Evaluation of New*

Basics, Assessment and Reporting Framework Pilot Study, Queensland Studies Framework Background Papers).

1. The aim is not to replace school-based assessment or curriculum planning and implementation. As supplementary to current school-based assessment, rigorous and comparable assessment processes are needed that remain faithful to i) agreed standards and principles of assessment, ii) the diversity of curricular and syllabus provision across Queensland, and iii) agreed processes of quality assurance. For these to be accomplished over time, teachers need to be at the centre of the key processes.
 2. Standards-based assessment should be a generative resource for focusing what is taught, how it is taught, and how it is reported; the quality and consistency of what students learn should be enhanced through the establishment of 'rigorous comparable assessment' against defined standards (for example, *Smarter Learning* release, April, 2005; *New Basics and school curriculum, teaching, assessment and reporting in Queensland schools Years P-10, 2004*: pp. 5, 7 and 10; and *New Basics Research Program; External Evaluation of New Basics*). That is, while assessment aimed at both quality and comparability should not drive curriculum, it can productively focus attention on key knowledge, understandings, communication skills, and learning dispositions.
- 3.2 *A reliance on research*: Basing decisions about practice and policy on research is a Queensland Government-endorsed characteristic of an effective school system. This means a commitment to the continuous conduct and dissemination of research and development around curriculum, assessment and reporting³. The principles to be noted here are:
- that there should be a growing body of locally conducted research, aimed at enhancing teaching and learning, on which to base educational decisions
 - that such a body of research should be competently conducted and produced, generalisable and relevant to education in contemporary Queensland
 - that systematic inquiry conducted out of Queensland and Australia⁴ should be scanned and brought to bear, where relevant, on decisions for implementation in local conditions.

4 What are the key research findings relevant to the project?

- 4.1 Committing to decisions based on research means that the participants in the project share a view of the conclusions that are warrantable from the relevant research. So, at this time, what are some of the key findings from Queensland schools⁴ to which the project attends? The findings drawn on here clearly are not intended to refer to all schools in Queensland, but their recurrence in the conclusions of research projects and in professional discussion more generally suggest they are 'candidate findings for attention'.

1. *Many Queensland educators are 'sampling' the curriculum as a way of uncluttering the curriculum:* 'The curriculum in the compulsory years is fragmented ... entire syllabus strands or at least many of the concepts within syllabus strands have disappeared' (*Assessment and Reporting Framework Pilot Study*, 2003: p. 3). There are significant and haphazardly distributed discrepancies between what is included in students' studies in schools and what curriculum documents outline – gaps between what is taught and what is supposed to be taught, according to the syllabuses across the school years up to Year 10.
2. *There is diversity and uncertainty in the practices of assessment:* It was noted above that school-based assessment is well-established in Queensland, and there is a level of expertise among teachers in the generation of assessment tasks, the conduct of assessment, and the moderation of grading that can be built upon constructively. The distribution of that expertise across Queensland schools, however, is highly uneven, and seems mostly located among teachers of the senior high school years. Evidence indicates that many teachers need to be strongly supported to develop and apply knowledge and skills in the reliable and valid assessment of students' work and in reporting on that assessment to stakeholders (*New Basics Research Program; External Evaluation of New Basics; Assessment and Reporting Framework Pilot Study*, p. 3).
3. *Standards-based assessment can bring school change:* Educational practices can change, and assessment processes, along with other forms of professional development and institutional reform, have been shown to be one significant, scalable and cost-efficient lever for productive change (*New Basics Research Program; External Evaluation of New Basics*).
4. *The competence and commitment of teachers can be and needs to be supported:* In aiming to reform or improve education, it is important to make a strong commitment to the competence of teachers, including their competence to recognise areas needing change and their competence in learning to manage productive change. The research shows not only that this is profitable, but also that it is equally important to acknowledge realistically the demands of teaching and the need for change processes to be strongly supported, over reasonable timeframes, in local school sites.

SECTION TWO: OUTLINING THE STRATEGY

5 Curriculum, assessment and reporting: What is the logic of alignment?

- 5.1 It is the generative organising role of 'standards' in improving consistency of curriculum, assessment, and reporting that is the starting point for this project. It is this approach that offers more evident benefits than efforts directed solely at changes to curricular inputs, assessment regimes or standardised testing.
- 5.2 That is, this project does not begin from a position that one or more of these categories of activity (say, curriculum) need/s to be brought into a closer relationship with one or more others (say, assessment). Rather, educators currently observe significant variation in curriculum, assessment and reporting in Queensland schools. This project is about enhancing the alignment of all of these through a focus on the development of standards, developed around a notion of essential learnings within and across the curriculum, comprised of statements about capabilities that are assessable and that directly relate to assessment and reporting activities.

6 What is 'essential' in and across the curriculum?

- 6.1 In order to participate successfully in contemporary social, economic, and cultural life, all young Queenslanders should acquire certain essential capabilities, taken to comprise knowledge, skills, understandings and values/dispositions. It is reasonable to expect that educational authorities will articulate these capabilities, and that the educational community and the community at large will develop a shared sense of their meaning and of both their cultural and educational significance. The capabilities articulated, as they apply across the domains of curricular experience provided by schools, can be taken, in aggregate, to comprise essential learnings – knowledge, understandings, skills, values and dispositions to which students should be explicitly exposed, and that they have various opportunities to acquire and display.
- 6.2 Because a variety of syllabuses and learning areas are in operation at any given moment in Queensland, the specification of the essential learnings cannot be based only on one such formation, or made up of elements relevant only to one formation.
- 6.3 The process of making statements concerning essential learnings for Queensland schools needs to be bound by a number of key principles:
1. The essentials need to arise from current provisions, rather than be themselves additional curricular features, or 'add-ons' to current practice.
 2. The essentials need to be directly realisable in assessable activities, providing sufficient information for a reasonable program of specification.

3. The key concepts that make up the essential learnings need to be thought of as the unifying themes of current learning areas, receiving pervasive, sustained treatment across the years, in the sense of 'spiralling through the curriculum'. They need to be highly generative concepts, allowing for a rich set of realisations. They are to be thought of as the 'deep dimensions' of a curriculum, priority interpretations or key sense-making devices of an otherwise potentially loosely connected array of topic-driven activities. It is important to note, however, that the particular epistemological status of these essentials (cognitive processes, key propositions, concepts or topics, skills, and so on) may vary across learning areas.
 4. The concepts that make up the essential learnings need to include non-cognitive, dispositional capabilities (motivation, persistence, adaptability, an attitude of inquiry, and so on, Heckman 2001, 2005). These kinds of capabilities relate directly to the desirable attributes of school students at the end of Year 10 in Queensland, and have been shown to be predictors of success in lifelong learning.
- 6.4 In addition, the formulation of essential learnings needs to be informed by three underpinning position statements⁵ about:
- the desirable attributes of Queensland school students at the end of Year 10 as they transition to the senior high school years, training, or work
 - the desirable attributes of the school learning experiences with which students are provided
 - an inclusive appreciation of the varied domains of educational experience that currently operate in Queensland.
- 6.5 The desirable attributes of Queensland school students at the end of Year 10 reflect their commitments to:
- personal competence, success, security and wellbeing
 - fostering an attitude of active lifelong inquiry, innovativeness and creativity
 - social and cross-cultural inclusion, participation and cohesion.
- 6.6 The desirable attributes of school learning offered in Queensland schools will provide and support learning that is demonstrably:
- worthwhile and intellectually engaging
 - contemporary in content and futures-oriented in process and application
 - able to be monitored and accounted for in publicly defensible ways
 - coherent and cumulative.
- 6.7 These two sets of attributes can be considered broad philosophical positions on the 'why' and 'how' of schooling. A position also needs to be maintained concerning the intended outcomes of curriculum, outcomes that are of evident intellectual, cultural and practical value, but that are also seen in the light of, first an appreciation of the variety of learning

areas currently in operation in Queensland, and second, of the range of knowledge, understandings, skills, and dispositions that these areas offer. The statements about essential learnings need to encompass the following domains of curricular experience:

- specific fields of knowledge, traditionally expressed as disciplines, and conventionally drawn upon by such learning areas as 'key learning areas' or 'domain-specific' knowledge and skills⁶
- multi-disciplinary, problem-based activities, in which students work on extended pieces of work that address genuine, significant and demanding issues, and that i) call upon knowledge, understandings, skills, and dispositions related to a variety of disciplines and ii) bear on issues of citizenship and personal development
- communication capabilities that enable access to, creative work in, and development of learning across the full range of curriculum provisions and problem-based activities ('capabilities that beget capabilities' such as oracy, literacy, numeracy, and facility in ICTs, and sometimes including what are referred to as 'generic skills').

6.8 To summarise, essential capabilities comprise inquiry and performance practices that are of evident intellectual, cultural and practical value and that explicitly connect the key attributes of school students at the end of Year 10, and the key attributes of educational experiences, via the key capability domains. They thereby become a device for explicitly relating actual activities to, on the one hand, the nominated features of effective participation in contemporary social, economic and cultural life, and on the other, nominated curriculum intents across a range of formations. An important task for the project then becomes to reference these to the learning areas in use in Queensland.

6.9 The strategy of putting essential capabilities in place is not intended to override school curriculum provision, the scope and sequence of which they have adapted in light of the needs of their local communities. It represents nonetheless a commitment to have students display mastery of these essential learnings, drawn from these domains of curricular experience, characterised by these desirable attributes and aimed explicitly, and in ways that are publicly evident and defensible, at the development of these desirable graduate attributes.

6.10 The aim is to find essential capabilities that:

- are essential to the domain of curricular experience and are identified with the discipline, groups of disciplines or problems by teachers, students and the general public (for example, what do social scientists know and do?)
- are considered to be worthwhile in that i) they form part of the rationale for gaining mastery in a domain of curricular experience and ii) they simulate practice in the world beyond school (why is it important to study Health and Physical Education?)
- relate to identifiable and manageable areas of study in which continuous development is expected across the school years up to Year 10, even though the emphasis and depth of treatment would be expected to vary across phases

- have the potential to cluster learning outcomes together in different ways each time they are addressed in the curriculum
- have the potential to engage pedagogy and assessment in a wide variety of ways
- reflect varying dimensions of intellectual, cultural and practical value within and across disciplines
- are able to engage teachers in discussions about assessment, learning and the curriculum area itself, providing them with directions for enhanced pedagogy and assessment practices.

6.11 Taken together, these features and the processes used to bring them about in statements of essentials, entail the processes of establishing and applying standards.

7 What are 'standards' and how are they established?

7.1 Standards are aimed at mapping what students can do at agreed junctures (the 'milestones' of their achievement), and how well they can do it (the 'quality' of their achievement). These standards need to have clear and understandable relationships to:

- important aspects of domains of educational experience
- important features of the qualities of work that students can display under known conditions. That is, for comparability of standards application, there needs to be some publicly acceptable terms in which the conditions of a task's completion are agreed and known.

7.2 Standards, therefore, represent statements of milestones in students' development through the phases of a curriculum. These milestones, and the ways in which students can display their accomplishment of them, are best developed through a process whereby the logic of particular curriculum experiences is explored and documented by experts, along with the ongoing empirical documentation of what goes on in schools around certain points in time.

7.3 It is clear that the statements of standards themselves cannot stand alone purely as verbal descriptions, nor can exemplars and annotations stand alone in such a way as to give public confidence in the consistent application of standards. Such confidence can be maximised, however, through a combination of these three elements: descriptions, exemplars, and the collected annotations of educators working with students' performance around those exemplars. It is in this interaction that educators can share, refine and produce, over time, 'knowledge of a standard'.

7.4 To summarise, a standards framework comprises:

- statements about:
 1. continua comprising sequences of practices – the milestones – representing the essential learnings for domains of educational experience

2. the range of qualities, reflecting those practices, sought in students' displays of mastery (stated in terms of attributes rather than deficiencies)

- exemplars whereby students' work on a certain candidate task is made available
- annotations and records of exchanges about and around these processes focused on the exemplar tasks.

7.5 To establish standards the recommendations are:

- select tasks that have the potential to instantiate an essential curricular element at a candidate juncture point
- describe the demands of each task in such a way that a student could reasonably be expected to meet those demands at a juncture point
- describe a reasonable set of conditions of completion, reflecting the material, temporal and social resources reasonably expected to be available to students in the process of task completion
- produce statements of relative quality on key dimensions of students' products for and around these tasks, statements that describe discernible differences in quality of the displays of mastery
- annotate this entire process with observations and recommendations from schoolteachers, curriculum planners, discipline experts, and educational assessment experts
- repeat this process to produce a bank of candidate tasks from a range of curriculum domains of educational experience.

7.6 The process of developing, establishing and refining standards needs to ensure:

- that every learning area is described by the same number of milestones and standards/quality statements to allow direct comparability; the actual number is to be canvassed and debated over the course of the project; however, the number of standards should represent the minimum number of categories that can be used to discern consequential variations in students' completion of tasks or compilations of task portfolios; the advantage of settling on the same number of milestones and statements is most obvious in the reporting of attainments; the project may conclude that there are compelling reasons to have these numbers vary across the curriculum areas, but a strong prima facie case exists on the grounds of accessible reporting
- that there is evident comparability and equivalence, even though not exact replication, in the application of these standards (evident when a variety of students' performances can be reliably and validly compared)
- that classroom teachers remain at the centre of all phases of this process, that is, the development and analysis of tasks, social moderation procedures, application of assessment standards, and the refinement of the process generally and the standards in particular

- that four categories of people are involved in the working parties that make key decisions throughout the establishment and implementation of such a framework:
 1. recognised high-quality teachers in curriculum areas
 2. discipline experts, drawn, most probably, from relevant faculties in universities
 3. disciplinary experts working in applied fields in which contact with a range of cognate disciplines is commonplace
 4. educational assessment experts
 - and that working parties are set up for each of the domains of curricular experience, with a coordinating body that can ensure effective and efficient interaction where appropriate.
- 7.7 The collaborative development of a set of specifications for these broad categories of essential learnings is best undertaken by people whose daily work concerns the development of new knowledge, the application of new knowledge through its contacts with related understandings, and the educational application of new knowledge through contact with novice learners.
- 7.8 In developing a standards framework, there is an initial need for a close, conceptually coherent understanding of the learning area at hand (KLA, etc.) so that the essential dimensions can be 'unearthed' (that is, rich descriptions of elements from the learning area that provide the background for writing the milestones statements). Optimally, this involves the interplay between two ways of identifying essential capabilities:
- by interrogating the learning area and deducing its underlying descriptions of growth
 - by examining examples of student work to map progression and demonstrate degrees of mastery along the dimension.

8 What are the assessment options?

- 8.1 All assessment strategies trade between forms of validity and reliability⁷. Much of the valuable assessment work done by teachers, formal and informal, weekly or even daily, generally has high local, ecological validity. This is because such assessment is embedded in the local conditions of the teaching-learning site, and with the teacher/assessor's rich knowledge of the histories and circumstances of the learners. Nothing in the planning or conduct of this project is to be interpreted as diminishing the value or significance of these processes. Assessment strategies can also serve the purpose of clarifying priority learnings across sites or systems. It is here that reliability, consistency and other forms of validity become privileged. In this light, the following points address assessment for this latter purpose.
- 8.2 At issue is the best way/s of achieving comparability across Years P-10 in Queensland. In this section two strategies are proposed for achieving comparability in assessments and reports of students' achievements.

1. Common assessment, operating on:
 - externally validated student task (with panelling to confirm validity/curriculum links)
 - trialling and refinement of tasks (to ensure technical acceptability of the item/s and its suitability for the student cohort for whom it is intended)
 - administration and marking guides accompanied by exemplars (to promote consistency of teacher judgment)
 - clear and agreed processes for the monitoring of agreement among teacher–assessors (to promote reliability of scoring/results).
 2. Social moderation on the basis of informally validated tasks, and operating on:
 - descriptors of intended standards
 - evidence of learning (that is, student work) that purports to meet the standard
 - consensus amongst expert judges (teacher–assessors and moderators) that the evidence reflects the standard.
- 8.3 The question here concerns the requirements of reliability and different forms of validity for different purposes and in different educational sites. This is a question about the collection and scrutiny of evidence. Evidence of students' achievements (milestones and quality) can be collected via:
- teacher-devised tasks, which may represent high levels of ecological and population validity (Cicourel & Katz 1996: the degree to which the behaviours observed and recorded in a data collection reflect the behaviours that actually occur in the relevant natural settings, and thus can be generalised to other sites and groups of people), but which are threatened by lower levels of construct validity and reliability, and which, for these, therefore, would need centrally driven assurance processes
 - a bank of model assessment tasks including both centrally and teacher-derived tasks and assessment procedures, offering moderate reliability and validity, and usable as a tool for use by teachers from school years up to Year 10 to draw down assessment tasks for assessing the essentials of all learning areas at any time over the school years up to Year 10
 - common centrally derived tasks, characterisable by high reliability but threatened by lower ecological and population validity, and which, for these, therefore, would need local teacher-led assurance processes.
- 8.4 Given its clear advantages in terms of reliability and construct validity, two crucial components of comparability across sites and systems, the common assessment approach to providing system-wide data is recommended, *at this time*, for three main reasons:
- the results will be reliable in the immediate future

- teachers will be able to model well-designed assessment instruments
 - teachers will have the benefits of professional development via their experiences in evaluating centrally developed tasks and in marking these tasks.
- 8.5 But equally, in recognition of the well-developed capabilities of some educators and schools in the development and conduct of rigorous and comparable assessment, there should be an option for school-derived tasks to be used, *at this time*, as the bases of reporting against standards. This option is aimed at maximising the range of curriculum offerings within which reliable, comparable assessment can be conducted.
- 8.6 The qualifier — *at this time* — is important. It is meant to emphasise that qualities such as alignment, comparability, reliability and rigour cannot be achieved overnight; these are accomplishments of a profession over time and need to be regarded in this evolutionary sense. Over the course of the project it needs to be ascertained how and how well teachers and schools might productively contribute to this general process in such a way as they will come to feel confident enough to choose to shift from the former to the latter approach or possibly vice versa, in the interests of achieving better balance between demonstrated levels of construct validity and reliability with increased levels of ecological and population validity.
- 8.7 Moderation refers to a set of processes aimed at achieving comparability of grades assigned to student work, across teachers/assessors and across sites (schools, systems, regions, etc.). There are three general approaches to moderation: statistical, social, visitation:
- ‘Statistical moderation’, as in, for example, the Queensland Core Skills Test, aims to link assessments in a variety of curriculum domains through a single assessment activity – a test
 - ‘Social moderation’ refers to the process of validating teachers’ judgments of the standard (milestones and/or quality) of students’ work by having those teachers’ judgments reviewed by peers, internally (within the same site) and/or externally (from a different site). Social moderation is what many Queensland teachers know and accept as ensuring acceptable levels of reliability and validity. It gives public credibility to results appearing on the certificates. The peers, in most cases, are teachers on curriculum-area-specific review panels
 - ‘Visitation moderation’ refers to the process of validating teachers’ judgments of the standard of students’ work by having those judgments reviewed by subject assessment experts, district directors, or ‘itinerant moderators’ from the systems’ centres.
- 8.8 In light of the goals of the Queensland Curriculum, Assessment and Reporting Framework, of the history of reliance on teachers’ judgments, and an ongoing commitment to that reliance, the recommendation here is to develop social moderation as the cornerstone for this element of the strategy.

9 How to develop a framework for reporting

- 9.1 It is not judged profitable at this time to pre-specify the nature of the optimal reporting framework, other than to indicate that it should apply, and mean the same for the practical purposes of judgment, across domains of curricular experience. The framework should arise from the empirical and conceptual work conducted in the standards, essentials, and task development phases of the project.

10 What are the steps in implementing the strategy?

- 10.1 Establish a set of statements about the essential capabilities that can operate in and across domains of curricular experience in Queensland, ranging across the school years up to Year 10.
- 10.2 Develop a set of statements concerning standards of student achievement, taking into account the qualitative nature of the tasks at hand and the quality of students' performance.
- 10.3 Develop assessment tasks that reflect these guidelines, commitments and principles.
- 10.4 Develop a repository of assessment activities or tools that can be used by teachers in their school-based assessments to supplement the comparable task data.
- 10.5 Establish a set of principles and guidelines by which rigorous and comparable assessment will take place, and a set of principles concerning the relationship of that assessment to ongoing curriculum and assessment activities in schools.
- 10.6 Use the statements of essential capabilities and standards to implement a set of common tasks across the domains of curricular experience at three key junctures across the school years up to Year 10, with an emphasis on comparability and on the quality and value of these tasks in themselves in light of the desirable attributes of school students at the end of Year 10 and of school learning.
- 10.7 Devise and construct quality assurance processes for the application of these standards and for the development of assessment tasks.
- 10.8 Develop an accessible framework by which reports can be made to systems, schools, teachers, parents, and students concerning students' achievements on comparable assessment tasks, ensuring that there is commonality in the application of standards, on the components of the results scales, and in the shared statistical meaning of those scales.
- 10.9 There has been considerable debate on the question of the three key juncture points for comparable assessment. On the one hand, the argument is to avoid the current basic-skills assessment years (Years 3, 5 and 7) to thereby avoid 'overloading' students, teachers and systems with high-stakes, external assessments. This would lead to the

selection of Years 4, 6 and 9, on the grounds that Year 8 is seen as a transitional year into high school and thus should not be used. On the other hand, using Years 3, 5 and 7 allows more direct comparison and correlation between both forms of assessment, thus providing additional levels of interpretation and potential application to practice and policy.

10.10 Both lines of argument are plausible. The recommendation is that the new reporting junctures be Years 4, 6 and 9 for these reasons:

- this avoids the basic-skills assessment years, a potentially critical point in teachers' and systems' acceptance of and positive engagement with the project
- reports on essential curricular learnings will be more informative at the older year levels (4, 6 and 9) because students will have had longer to engage in curricular learning, and the Year 9 data will be more directly predictive of senior-level success
- analyses relating basic-skills data to essential learnings data will be less direct but still eminently possible and potentially informative even given the difference in year levels.

11 What are the deliverables for the project?

11.1 The project should involve broad-based research and development activity that results in a body of evidence that, taken together, confirms the following. Note that these are not presented here in order of either priority or sequence.

1. Standards have been developed that co-ordinate statements of the Key Attributes of School Students at the end of Year 10, statements of the Key Attributes of Educational Experiences, and descriptions of the Domains of Curricular Experience (KLAs, rich-task, inquiry, problem-based programs, and Enabling Communicational Capabilities, etc.).
2. Queensland school students have been provided with more opportunities to engage and succeed in learning experiences that are clearly articulated, challenging, coherently designed and sequenced, and that materially contribute to the development of productive and proactive learners.
3. Improving the alignment of curriculum, teaching, assessment and reporting has helped teachers plan their work with students and provided a clearer means of evaluating the efficacy and relevance of that work.
4. This improvement in alignment has helped teachers develop their knowledge and understanding of assessment issues, and enhanced their skills as assessors of students' work, and it has not, in the process, deskilled them by marginalising them from the central operations of the project.
5. This improvement in alignment has helped teachers and school administrators communicate students' achievements to other parties in consistent and interpretable ways.

6. Rigorously designed and assessed tasks have been developed that allow Queensland schools to engage in demanding and worthwhile assessment activities that permit comparable interpretation across diverse educational sites at three agreed junctures; at the most general level, students' completion of comparable assessment tasks at key junctures, judged against common and agreed standards, have resulted over time in the clarification of key curricular objectives and the improvement of students' performance in key domains.
7. Focusing on this alignment has also meant that students' achievements can be more meaningfully assessed, documented and reported and that therefore their progress can be more clearly understood by them and their parents, their potential employers and the community at large, and by other educators, as students move from school to school or on to other educational and training institutions.
8. Improving this alignment has meant that parents find it easier to understand the reports they receive on their children's progress in school. The categories and levels of assessment performance are shown to be clearer and more obviously related to categories and to an 'assessment logic' that parents encounter elsewhere.
9. Over the course of the project, a sample of 'target schools' has been selected that represent agreed demographic strata, from which longitudinal data has begun to be gathered that compares the relationship between school-derived and common tasks assessment results; this will allow refinement of 'grey area' judgments and give some empirical guidance to modifying both common tasks and the assessment task bank.
10. Research and development should also be conducted that aims to provide cross-validation with interstate or international data.
11. Improving this alignment in terms that can be related to national statements and strategies gives Queenslanders evidence of the quality and cost-effectiveness of their education system.
12. The project has been conducted and evaluated in compliance with a publicly agreed model of standards application (e.g., a publicly recognised evaluation system drawn from options outlined in, for example, as Boulmetis and Dutwin [1999], such as standards of utility, feasibility, propriety and accuracy as outlined in Sanders [1994]).

NOTES AND BIBLIOGRAPHY

Note 1: Disclaimer

The points developed in this paper have arisen from discussions with participants listed in the Appendix, but the views expressed herein must not be regarded as a collection of the points of agreement among those participants.

Note 2: Variations in the vocabulary of 'essential learnings'

Cognitive science provides a set of apparently generic processing statements, such as information processing, memory, synthesising, evaluating, and so on. Bloom's taxonomy, for example, draws on some form of psychologised notion of essential processes that all graduates from a school system would be expected to have mastered:

1. knowledge: write, list, label, name, state, define
2. comprehension: explain, summarise, paraphrase, describe, illustrate
3. application: use, compute, solve, demonstrate, apply, construct
4. analysis: analyse, categorise, compare, contrast, separate
5. synthesis: create, design, hypothesise, invent, develop
6. evaluation: judge, recommend, critique, justify.

Among the descendants of this taxonomy, Anderson and Krathwohl (2001) incorporated both the kind of knowledge to be learned (knowledge dimension) and the process used to learn (cognitive process), allowing for the alignment of objectives to assessment techniques. Both dimensions are illustrated in the following table.

The Knowledge Dimension	The Cognitive Process Dimension					
	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge						
Conceptual Knowledge						
Procedural Knowledge						
Meta-cognitive Knowledge						

Table 1: The Revised Taxonomy Table

Three recent Australian examples also reflect this point.

1 *Example 1: Tasmania's 'Essential Learnings'*

The Tasmanian Department of Education has recently made a formal statement of the 'essential learnings' they wish all young Tasmanians to acquire through their schooling. This statement consists of a model that has thinking (inquiry and reflection) at its centre and four related sets of considerations:

1. Communicating: being literate, being numerate, being information literate, being arts literate
2. Personal futures: building and maintaining identity and relationships, maintaining wellbeing, being ethical, creating and pursuing goals
3. World futures: investigating the natural and constructed world, understanding systems, designing and evaluating technological solutions, creating sustainable futures
4. Social responsibility: building social capital, valuing diversity, acting democratically, understanding the past and creating preferred futures.

Under these are various kinds of investigative capabilities, communicational skills, attitudes about personal and social wellbeing, and domains of knowledge and understanding.

These essential learnings are underpinned by two further sets of statements. The first is a list of the *values* that are taken to guide education, and in particular the operation of these 'essential learnings': connectedness, resilience, achievement, creativity, integrity, responsibility, and equity.

Finally, a set of *purposes* is outlined that are intended to ensure that students: learn to relate, participate and care, learn to live full and healthy lives, learn to create purposeful futures, learn to act ethically, learn to learn, and learn to think, know and understand.

2 *Example 2: The 'Victorian Essential Learning Standards'*

The Victorian Curriculum and Assessment Authority has formulated a model that attempts to organise a large number of potentially disparate areas of study. These Essential Learning Standards consist of three strands:

- 1 Physical, personal and social learning: Knowledge, skills and behaviours in Health and Physical Education, Personal Learning, Interpersonal Development, Civics and Citizenship
- 2 Discipline-based learning: Knowledge, skills and behaviour in The Arts, English and Languages other than English, the Humanities, Mathematics, Science
- 3 Interdisciplinary learning: Knowledge, skills and behaviours in Communication, Design, Creativity and Technology, Information and Communication Technology, and Thinking.

This list is accompanied by statements concerning all students' needs to manage themselves as individuals and in relation to others, understand the world in which they live, and act effectively in that world. Similarly students are described as needing to create futures that are sustainable, innovative, and built on strong communities.

3 Example 3: Queensland's 'New Basics' program

The New Basics project aims to unclutter the curriculum and provide a set of reconstructed pedagogical approaches built around the completion of Rich Tasks that are taken to represent 'clusters of essential practices that students need in order to flourish in new times' (all direct quotes from *New Basics* website). The New Basics project is built on three categories of understandings: curriculum organisers; productive pedagogies; and Rich Tasks. The curriculum organisers are:

1. Life pathways and social futures
2. Multi-literacies and communications media
3. Active citizenship
4. Environments and technologies.

The Productive Pedagogies by which these organisers were related to the Rich Tasks are:

- 1 Intellectual quality
- 2 Connectedness
- 3 Supportive classroom environment
- 4 Recognition of difference.

The Rich Tasks were organised into three 'suites' in three to four year blocks between Years 1 and 10. The tasks are described as 'the outward and visible sign of student engagement with the New Basics curriculum framework'. They were assessable and offered rubrics for reporting over the three-year curriculum phase.

Note 3: The limits of research-based decision making

It is important to note that a commitment to research-based decision making brings with it the responsibility to spell out any other compelling overriding or compensatory bases for decisions – that is: *When will competently conducted and produced, locally relevant research not clinch the case? What constitute other potentially overriding or compensatory factors, and when will these become relevant and applicable?* It may be, for instance, that certain groups made especially vulnerable by a decision have not figured in the research data to an adequate extent, or that some professional or community groups have such an aversion, moral or otherwise, to the warranted recommendations of a research project that such recommendations cannot be adequately effected at that time.

Note 4: Relevant research

It should be noted that overseas research and development projects have drawn comparable conclusions about school systems in other countries. Probably most available are research and development projects from the USA, such as:

Bodilly, S., Keltner, B., Purnell, S., Reichardt, R. & Schuyler, G. (1998). *Lessons from New American Schools' scale-up phase: Prospects for bringing designs to multiple schools*. Santa Monica, CA: RAND.

Gardner, H. (1999). A disciplined approach to school reform. *Peabody Journal of Education*, 74, 166-173.

Newmann, F. & Associates (1995). *Authentic achievement: Restructuring schools for intellectual quality*. San Francisco, CA: Jossey-Bass.

Rosenblum Brigham Associates (1998). *ATLAS Communities: Staying the course. Implementation and sustainability of the ATLAS design framework in two sites*. Philadelphia: Author.

Slavin, R.E. & Madden, N.A. (2001). *One million children: Success for all*. Newbury Park, CA: Corwin.

Note 5: Desirable attributes

Adapted from the *Queensland Studies Framework*, Brisbane, Queensland Studies Authority, 2004.

Note 6: Learning and disciplinarity: Inter-, multi- and trans-

Adapted from Freebody, Hedberg & Guo, (2005) pp. 4-5.

Learning experiences are both designed and sequenced; they can be planned and scrutinised in terms of the kinds of outcomes afforded learners, the material conditions and cognitive and social-organisational processes by which those outcomes can be achieved, and changes in those conditions and processes over time.

Learning experiences entail materials and apparatuses that combine to provide learners with or guide learners toward knowledge; they are distinctive experiences in that they are designed to convert experiences into portable knowledge, and known by the participants to be so designed; that knowledge, in turn, is generally framed in terms of three potential and related settings – the setting of forthcoming performance-test demands, the setting of real-world usage, and the setting of developing disciplinary knowledge.

All three of these settings entail not only propositional (factual) knowledge; they also involve conceptual and abstract understanding, motivations and dispositions of inquiry, preferred

cognitive processes, and procedural understandings about how further, potentially relevant knowledge can be located, synthesised, and put to practical work in particular settings. That is, taking an appropriate and active part in a real-world setting, a performance-test, and disciplinary learning call for particular understandings of practical social, motivational, cognitive, and metacognitive patterns and structures.

Disciplines, from which are recast school curricular formations, are not just collections of topically related propositions. They are as well sets of dispositions about what counts as evidence, how it is that the inquirer can move from the experience of a phenomenon to a set of beliefs or preferred speculations, and thereby on to knowledge, and what it is, intellectually and socially, that the inquirer is trying to accomplish by displaying that process and arriving at that knowledge. That is, disciplines constitute distinctive epistemologies as part of their accumulated and evolving histories. We would expect therefore to observe some features of classroom learning, across differing disciplines that reflect these differences of proposition, procedure and disposition. Building on a long tradition in the philosophies of both Science and knowledge (for example, Becher 1989; Haack 1993; and MacDonald, 1994) our orientation is to consider the disciplinary setting of school work as a collection of acculturational processes, with varying degrees of distinctiveness at different points along the school years; we do not, that is, expect that 'good' teaching and learning in one disciplinary setting will necessarily constitute comparably 'good' in another.

In the ongoing debate concerning the intellectual, cultural and practical value and place of discipline-based versus trans- or inter-disciplinary activity, historians have recently questioned the necessary, and apparently 'easy' correlation of disciplinarity and deterministic learning and subjectivity formation:

If the tendency is now to associate interdisciplinarity with freedom, and disciplinarity with constraint, a closer look at the history of these disciplines shows that the dialectic of agency and determinism, currently distributed across the disciplinary/interdisciplinary divide, was at the heart of disciplinary formation itself. (Anderson & Valente 2003: 2)

So debates that go back at least to the European Renaissance, framed variously in terms of Scholasticism versus Humanism (Ong 1958) or rationality versus reasonableness (Toulmin 2003) continue to traverse educational philosophy, policy and practice.

As Leonardo (2004) pointed out, on the one hand the case against draws on:

- questioning the insularity of various knowledge bases
- critiques of the relationship of such knowledge bases to the experienced social lives of contemporary citizen-workers especially young learners
- the general tendency for disciplinary boundaries to have become blurred even in the academy. By inference, this case is in favour of developing generic accounts of knowledge, teaching and learning.

On the other hand, those endorsing the distinctiveness of the disciplines and their implications for good practice in education point to how they have evolved historically to provide different kinds of

answers to perennial human questions about the world and human experience. The argument here is that each discipline has developed conventions or norms that are applied to the question of how it is that human experience can be converted into knowledge, and how that knowledge can be appropriately disseminated:

Disciplines are characterized not only by their content but arguably as much by the methodology. That is, disciplines are as much about what they study as they are about how they study 'reality.' (Leonardo 2004: 3)

Note 7: Types of validity

There are three main ways of assessing the validity of assessment materials:

1. **Face validity** (sometimes called surface or content validity) refers to the extent to which a measure appears on the surface to measure what it is supposed to measure
2. **Criterion validity** is a way of assessing validity by comparing the results with another measure. If the other measure is roughly compared at the same time it is referred to as concurrent validity. If the other measure is compared at a later time it is referred to as predictive validity
3. **Construct validity** is a way of assessing validity by investigating if the measure really is measuring the theoretical construct it is supposed to be measuring.

There are two main ways of assessing the validity of assessment procedures or activities:

1. **Internal validity** is related to what actually happens in a study. In terms of an experiment it refers to whether the independent variable really has had an effect on the dependent variable or whether the dependent variable was caused by some other confounding variable
2. **External validity** refers to whether the findings of a study really can be generalised beyond the present study. We can break external validity down into two types:
 - **Population validity** - which refers to the extent to which the findings can be generalised to other populations of people
 - **Ecological validity** - which refers to the extent to which the findings can be generalised beyond the present situation.

(adapted from Cicourel & Katz 1996)

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APPENDICES

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