Standards-Based Education in the United States of America: What are its Implications for Curriculum Reform in Australia?

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Acknowledgments  
The author wishes to acknowledge the contributions made by the following people in completing this paper. William Spady of HeartLight Education, Tyrone, Georgia, provided information about his involvement in outcome-based education in Australia. Katherine Schoo of the Australian Curriculum Studies Association provided information on William Spady’s presentations on outcome-based education in Australia. Alan Tudge, adviser to the Minister for Education, Science and Training, outlined the rationale for developing the statements of learning. Thelma Perso of the Australian Capital Territory Department of Education, Youth and Family Services provided guidance to complete the section on the Australian Capital territory. Debbie Efthymiades of the Northern Territory Department of Employment, Education and Training provided information to complete the section on the Northern Territory. John O’Brien and Carol Taylor of the Board of Studies New South Wales provided information to complete the section on New South Wales. Mark Snartt of the Queensland Studies Authority provided guidance to complete the section on Queensland. Trevor Fletcher of the South Australia Department of Education and Children’s Services provided information to complete the section on South Australia. Paula Wriedt, Tasmania’s Minister for Education, provided sources for information on the Leading Learning conference. Meredith Nolte, formerly of the Board of Studies Victoria, provided information in 1998 and 1999 used to complete the section on Victoria.
Abstract
Following the decision of policy makers to promote national content standards based on those for Mathematics released by the National Council of Teachers of Mathematics in 1989, standards-based reform became a principal part of the national education reform strategy in the United States from the early 1990s. The intention of this paper to examine the influence of standards-based education on curriculum reform in Australia is introduced by an overview of standards-based reforms in the United States at both the national and state levels. The philosophical and theoretical bases of curriculum reforms in outcome-based education at both the national and state levels in Australia are analysed, and evidence of the influence of standards-based education is cited. The paper concludes by assessing the extent to which standards-based education has transformed curriculum reforms in Australia.

A common antecedent influenced standards-based education in the United States and national curriculum collaboration in Australia. The principles of outcome-based education provided a foundation for both the standards movement in the United States and national curriculum collaboration in Australia, although subsequent events led to the role of outcome-based education becoming significantly different in the two countries.

The key principle of outcome-based education of identifying outcomes, and then constructing a curriculum to achieve them, formed the process in initial standards-setting exercises in some states in the United States in the early 1990s. Attacks by conservative Christian groups over the emphasis of outcome-based education on the teaching of values, the presentation of radical social, political and economic values, the promotion of a whole language approach in reading, and multicultural education stifled these reforms. However, a multiplicity of trends in American education had concurred by this time leading conservatives and liberals to forge a consensus about focusing on what students should learn. From this consensus, the definition of national standards based on academic disciplines issued from the six National Education Goals expounded following the Charlottesville Education Summit convened by President George Bush in September 1989 (Vinovskis, 1999). Policy-makers set nationally recognised groups in key disciplines the task of developing national standards consisting of content, performance and opportunity-to-learn standards (National Education Goals Panel, 1993). This shift in standards-setting, delineated by Ravitch (1995) as constituting the setting of clear and measurable content standards, focusing content standards on cognitive learning, and basing content standards on traditional academic disciplines set the standards movement apart from outcome-based education. In contrast, outcomes set in outcome-based education are often so vague as to be inherently unmeasurable, frequently cover affective or psychomotor behaviours, and are usually organised around
interdisciplinary or non-disciplinary topics. As a consequence, the ascendancy of standards-based education in the United States relegated outcome-based education to a marginal position in curriculum reform (Spady, 1998).

The adoption of corporate management approaches in education systems in Australia led to the incorporation of outcome-based education as a significant assumption underlying national curriculum collaboration in the 1980s. Policy-makers viewed outcome-based education to be compatible with the drive for economic reform, because it promised the delivery of measurable cognitive and affective outcomes. Outcome-based education gained a pre-eminent position in Australia because it represented the most recent form of behaviourist theory. The principles of programmed learning and mastery learning introduced into Australian education in the 1960s and 1970s provided a foundation for the acceptance by education officials of outcome-based education in the 1990s. Its widespread acceptance was fostered by a consortium of national and state organisations sponsoring a visit to Australia by a leading advocate of outcome-based education, William Spady, who conducted a series of workshops in Canberra, Sydney, Melbourne and Brisbane in September 1992 (Spady, 1993). The ascendancy gained by outcome-based education within the educational community found serious detractors only among mathematics educators. In a critique of the process of national curriculum collaboration, Ellerton and Clements (1994) contended that the incorporation of an outcome-based approach in the Mathematics profile led to an instrument that was deficient in measuring student progress. This conclusion led a group of mathematicians from the University of Melbourne to lobby the Victorian Minister for Education to form a committee in May 1993 to review the Mathematics profile. However, the Australian Education Council thwarted this move in July 1993 by referring the national statements and profiles to the states and territories for adoption.

The purpose of this paper is to examine the influence of standards-based education on curriculum reforms in Australia. Although this topic is considered within the grounding of Australian curriculum reforms in a theoretical basis of outcome-based education, evidence of the more recent influence of standards-based education is also reported. The significance of this paper lies in providing current information on a topic that is gaining increasing importance in providing a key influence on curriculum reform in Australia. In expressing an imperative to search for new solutions to intractable problems in curriculum reform, policy-makers and curriculum developers in Australia are likely to turn to standards-based education as offering potential answers. By gaining a deeper understanding of the elements and influence of standards-based education, policy-makers and curriculum developers are more likely to be able to assess the ramifications of applying its key elements within the Australian context.
Methodology
Several research methods were applied to collect, analyse and report data presented in this paper. Developmental method was applied to investigate patterns and sequences of change over time relating to standards-based reforms in the United States and curriculum reforms in Australia. Historical method was applied to reconstruct the antecedents to standards-based reforms in the United States and curriculum reforms in Australia objectively and accurately. Content analysis method was applied to describe and analyse systematically written communication about standards-based reforms in the United States and curriculum reforms in Australia factually and accurately. The application of these methods is described below.

The first step in researching standards-based reforms in the United States and curriculum reforms in Australia involved contacting education agencies involved in these reforms. Policy documents, standards documents and curriculum frameworks collected from education agencies provided a valuable source for information on the contexts of these reforms, and the nature and organisation of standards and curricula. Credence was given to personal correspondence with officials of particular organisations involved in these reforms for verifying the currency of these secondary sources. The main source for this information, however, was documents transmitted over the World Wide Web. Links were made to web sites offering information about standards-based education in the United States through the portal, Developing Educational Standards. Links were made to web sites offering information about curriculum reforms in Australia through the portal, Education Network Australia. The content of reports on education reform and curriculum documents was analysed. The reports on education reform were examined to determine the historical context of national and state education reforms. The curriculum documents were analysed from two perspectives. First, the components were examined to identify the purpose of each document, the scope and sequencing of the content, activities and resources involved in using the document, and the sources of references in bibliographies. Second, the types of standards listed in each document were classified according to particular categories.

United States of America

National Standards
The first effort to develop national standards preceded any initiative undertaken by the federal government. McLeod et al. (1996) reported that the national standards for Mathematics originated from the work of the Commission on Precollege Education in Mathematics, Science and Technology, which released a plan of action for improving mathematics, science and technology education for all school students (National Science Foundation, 1983). Discussions at a series of conferences led the National Council of
Teachers of Mathematics (NCTM) to appoint a Commission on Standards for School Mathematics in 1986 to oversee the development of the national standards for Mathematics. Four working groups consulted focus groups within the educational community to develop the national standards for Mathematics, which were released in March 1989. Subsequently, NCTM published professional standards for teaching mathematics in March 1991 and assessment standards in May 1995. In 1995, NCTM initiated a project to revise and amalgamate the three sets of standards into a single volume, which was released in April 2000.

In June 1991, the National Education Goals Panel created the National Council on Education Standards and Testing to examine the feasibility of national standards and a national system of assessments, and to recommend policies, structures and the mechanisms for setting them. In its report, the National Council on Education Standards and Testing (1992) recommended that voluntary and dynamic national standards, which reflected high expectations, focus and direction, should be developed initially for English, Mathematics, Science, History and Geography. In addition, multiple measures consisting of individual student and large-scale sample assessments aligned to the national standards should be set. This recommendation prompted the United States Department of Education to fund projects by nationally recognised groups to develop national standards for Science, History, the Arts, Civics and Government, Geography, English Language Arts, and Foreign Languages in 1991 and 1992. In addition, independently funded projects were initiated to develop national standards for Social Studies, Health, Physical Education, and Economics.

The structures of the groups overseeing the development of national standards, the formats of their standards, and the release dates of original and revised versions are outlined in Table 1. Processes for seeking consensus through extensive consultations within the educational community characterised each of the national standards projects. However, a controversy of national proportions arose between liberals and conservatives during the development of the national standards for History, and a serious dispute occurred between the developers and the funding agency during the development of the national standards for English Language Arts. Confrontation between minority groups seeking greater representation of their ethnic heritages and conservative groups seeking to represent democratic principles binding the United States together as a nation led to the national standards for History being revised between November 1995 and February 1996 (Nash et al., 1998). The process for developing the national standards for English Language Arts was checked by refusal on the part of the United States Department of Education to renew federal funding for the last eighteen months of the three-year project. Philosophical differences between the United States Department of Education and the National Council of Teachers
of English and the International Reading Association led these professional associations to develop the national standards for English Language Arts in a partnership with the Council of Chief State School Officers.
<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Developers</th>
<th>Format of Original Version</th>
<th>Release Date of Original Version</th>
<th>Format of Revised Version</th>
<th>Release Date of Revised Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td>Consortium of National Arts Education Associations</td>
<td>content and achievement standards for grades K to 4, 5 to 8, and 9 to 12</td>
<td>March 1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civics and Government</td>
<td>Center for Civic Education</td>
<td>content standards for grades K to 4, 5 to 8, and 9 to 12</td>
<td>November 1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>consortium of the National Council on Economic Education and disciplinary associations</td>
<td>content standards and benchmarks for grades 4, 8, and 12</td>
<td>January 1997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Language Arts</td>
<td>National Council of Teachers of English and International Reading Association</td>
<td>content standards for grades K to 12</td>
<td>March 1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>consortium of the American Council on the Teaching of</td>
<td>content standards for grades K to 12</td>
<td>January 1996</td>
<td>language-specific and generic content standards for grades</td>
<td>1999</td>
</tr>
<tr>
<td>Foreign Languages and disciplinary associations</td>
<td>K to 12</td>
<td></td>
<td></td>
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<tr>
<td>Geography consortium of the National Council for Geographic Education and disciplinary associations</td>
<td>content, achievement and performance standards for grades K to 4, 5 to 8, and 9 to 12</td>
<td>October 1994</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Table 1  
(Cont.)

National Content Standards

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Developers</th>
<th>Format of Original Version</th>
<th>Release Date of Original Version</th>
<th>Format of Revised Version</th>
<th>Release Date of Revised Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Joint Committee on National Health Education Standards</td>
<td>content standards and performance indicators for grades K to 4, 5 to 8, and 9 to 12</td>
<td>May 1995</td>
<td>content standards for grades K to 4, content standards for U.S. history for grades 5 to 12, and content standards for World history for grades 5 to 12</td>
<td>one volume in April 1996</td>
</tr>
<tr>
<td>History</td>
<td>National Center for History in the Schools</td>
<td>content standards for grades K to 4; content standards for U.S. history for grades 5 to 12; and content standards for World history for grades 5 to 12</td>
<td>three volumes in October - November 1994</td>
<td>content and process standards for grades pre-K to 2, 3 to 5, 6 to 8, and 9 to 12</td>
<td>April 2000</td>
</tr>
<tr>
<td>Mathematics</td>
<td>National Council of Teachers of Mathematics</td>
<td>curriculum standards for grades K to 4, 5 to 8, and 9 to 12 and evaluation standards; professional standards for</td>
<td>March 1989; March 1991; May 1995</td>
<td>content and process standards for grades pre-K to 2, 3 to 5, 6 to 8, and 9 to 12</td>
<td>April 2000</td>
</tr>
<tr>
<td>Physical Education</td>
<td>National Association for Sport and Physical Education</td>
<td>content standards for grades K, 2, 4, 6, 8, 10, and 12</td>
<td>June 1995</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>teaching mathematics; and assessment standards</td>
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</tbody>
</table>
The bipartisan political support evident at the commencement of the national standards projects, however, dissipated following these controversies. Although the conservative Right's attacks undermined the consensus for developing national standards following the election of Republican majorities.
to both houses of Congress in November 1994, the movement for standards-based reform was invigorated by several events. These included the second National Education Summit convened in March 1996, the re-election of President Clinton in November 1996, the State of the Union address in February 1997, the third National Education Summit held in September 1999, and the fourth National Education Summit called in October 2001.

Further developments within standards-based education also played an important part in its revival. The lack of consistency between the national standards developed by the different subject-based groups led two national organisations to synthesise the work of these projects. Mid-Continent Research for Education and Learning (McREL) applied research findings on critical issues concerning standards setting to design a database of 256 standards and 3,968 benchmarks derived from an analysis of the standards documents (Kendall and Marzano, 1997). McREL then conducted a study to reduce the subject area content coverage to a manageable level. In April 2001, McREL launched the National Dialogue on Standards-Based Education intended to provide a forum for participants to discuss standards-based education through a cumulative process involving meetings, as well as on-line and virtual dialogues. Council for Basic Education staff synthesised the national standards documents in the core subject areas to produce a book presenting condensed, edited and commonly-formatted versions of the national standards (Council for Basic Education, 1998). The Achieve Resource Center on Standards, Assessment, Accountability and Technology for Governors designed a standards database and developed a procedure for benchmarking state standards. The Coalition for Goals 2000 conducted a project to define a plan for the standards-setting process (Doyle and Pimental, 1999), and collaborated with the Education Leaders Council to create a results card for analysing the impact of state standards.

State Standards
The Goals 2000: Educate America Act, passed by the Clinton administration in March 1994, stated that state education agencies should use the national standards as blueprints to develop and implement state standards and curriculum frameworks, which are aligned to state assessment systems. From July 1994, state education agencies applied to the United States Department of Education for Goals 2000 grants under Title III to develop and implement comprehensive educational improvement plans, which included establishing challenging state standards. The Goals 2000: Educate America Act required each state education agency to appoint a broadly representative panel to develop state improvement plans in consultation with the state governor and the chief state school officer. The United States Department of Education (1995) reported that this process had been initiated by 47 states during the first year. A second report stated that 45 states had received Goals 2000 funds for the second year, and 19 states had had comprehensive plans
approved for third-year funding (United States Department of Education, 1996). The Improving America's School Act, passed by the Clinton administration in October 1994, required each state to develop state content and performance standards for mathematics and reading by the 1997-1998 school year and assessments by the 2000-2001 school year appropriate for all students, including the disadvantaged. In 2000, the United States Department of Education reviewed the alignment of each state's assessment system with its content and performance standards to ensure they met requirements for funding Title 1 programs. Following enactment in December 2001 of the No Child Left Behind Act by the Bush administration, Secretary of Education Rod Paige convened a negotiating committee in March 2002, which received advice from 140 interested parties on developing new standards and assessment provisions. In July 2002, Secretary Paige issued new proposals, and invited public comments. In response, 140 interested parties submitted over 700 comments, which were used to revise the proposals. In November 2002, Secretary Paige released the final regulations, requiring each state to integrate annual yearly progress reports on student progress against the state's standards into the state's accountability system.

Table 2 categorises the states according to curricular elements that support their state standards. An analysis of this pattern indicates distinct features reflecting regional traditions and styles of governance that have been extended to education. Decision-making processes applied in the states may be divided into two broad categories. In one group, responsibilities for decision-making have a long tradition of decentralisation with authority being vested in local school boards, whilst in the other group, responsibilities for these activities have been transferred in varying degrees to the state level with authority being vested in the state board. Reflecting a relatively equal balance between states applying decision-making processes at either the state or local levels, this pattern has remained constant for many years. The northeastern and mid-western states have generally retained decision-making authority at the local level to a greater
Table 2

State Standards

<table>
<thead>
<tr>
<th>Standards and Curriculum</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>State standards</td>
<td>Arizona, District of Columbia, Georgia, Hawaii, Idaho, Kansas, Maine, Maryland, Minnesota, New Mexico, Oklahoma, Pennsylvania, Texas, Utah, West Virginia</td>
</tr>
<tr>
<td>State standards incorporated into curriculum frameworks</td>
<td>Alabama, Kentucky, Massachusetts, Mississippi, Rhode Island, Tennessee, Vermont</td>
</tr>
<tr>
<td>State standards incorporated into curriculum frameworks and supported by curriculum guides</td>
<td>Arkansas, Connecticut, Delaware, New Hampshire, New York</td>
</tr>
<tr>
<td>State standards supported by curriculum frameworks</td>
<td>Alaska, California, Florida, Indiana, Nevada, New Jersey, Oregon, South Carolina, Washington</td>
</tr>
<tr>
<td>State standards supported by curriculum guides</td>
<td>Louisiana, North Carolina, South Dakota</td>
</tr>
<tr>
<td>State standards supported by curriculum frameworks and curriculum guides</td>
<td>Virginia</td>
</tr>
<tr>
<td>State standards supported by model curriculum frameworks</td>
<td>Missouri</td>
</tr>
<tr>
<td>State standards supported by model curriculum guides</td>
<td>Montana, Ohio</td>
</tr>
<tr>
<td>Model state standards</td>
<td>Colorado, Illinois, North Dakota, Wyoming</td>
</tr>
<tr>
<td>Model state standards incorporated into curriculum frameworks</td>
<td>Michigan</td>
</tr>
<tr>
<td>Model state standards supported by curriculum frameworks</td>
<td>Nebraska</td>
</tr>
<tr>
<td>Model state standards supported by curriculum guides</td>
<td>Wisconsin</td>
</tr>
<tr>
<td>No state standards</td>
<td>Iowa</td>
</tr>
</tbody>
</table>

extent than the southeastern, southern and western states, which have transferred decision-making authority to the state level. A gradation from centralising to decentralising decision-making authority in state standards is evident in the categories shown in Table 2. However, a major division exists
between the bulk of the states, which provide state standards, and a small number of states in the mid-west, the Great Plains and Rocky Mountains, which provide model state standards or no state standards. The approach of using state-developed standards as models for developing local standards or curricula is reflected in a group of states comprising two geographical clusters. The states of Michigan, Illinois and Wisconsin adjoining the Great Lakes, and the states of Colorado, Nebraska, North Dakota and Wyoming in the Great Plains and Rocky Mountains require local school districts to adopt local standards that meet or exceed the state model standards. A third group, represented by only the state of Iowa, made little, if any, concession to the tradition of local control by being the only state failing to develop state standards.

Australia

National Curriculum Collaboration

The development of the national statements and profiles between 1986 and 1993 was based on the assumptions and goals driving the broader agenda for educational reform in Australian education during the 1980s. Interpretations of policy-making involved in national curriculum collaboration during this period have contrasted the doctrine of corporate federalism with the states' rights position adopted by the states and territories (Bartlett, 1992; Bartlett et al., 1994; Lingard et al., 1995). In concluding that the federal Labor government initiated economic reform in the 1980s through corporate federalism, these commentators argued that management of curriculum development by the Australian Education Council took the form of corporate managerialism. This was evident in four underlying concepts. Curriculum was viewed in a product-like format. Instrumentalism was apparent in the autocratic relationships between participating groups and in consultations. Integration was seen in the drive towards uniformity and consistency in the eight learning areas and procedures for curriculum development. Purposive action was seen in the private sector style relationships within the Curriculum Corporation.

The formats found in the national statements and profiles are outlined in Table 3. The column reporting on types of standards presents the findings of the content analysis of outcomes in these documents. A similar format consisting of three parts was applied in the national statements across the eight learning areas. The first part presents a rationale statement for the learning area. The second part describes the knowledge, skills and processes for the strands of the learning area. The third part presents a sequence of learning activities for developing knowledge and skills across four bands. The analysis showed that the learning activities are generally expressed as curriculum standards, although those for Mathematics and Studies of Society and Environment contain a mixture of curriculum and content standards. A similar format was
applied to the national profiles across the eight learning areas. Each national profile organises outcomes and pointers for each strand into eight levels. The analysis showed that content standards are expressed as benchmarks with performance indicators that are not grade-related.

Recently, education leaders have raised concerns about the limitations of curriculum documents based on the national statements and profiles. At the ninth annual conference of the Curriculum Corporation held in May 2002, its chief executive, Bruce Wilson, identified shortcomings in five areas (Zbar, 2002). First, the outcomes presented in curriculum documents are too broad, lacking specificity in promoting academic achievement. Second, the generic form of these outcomes leads to very little knowledge and skills being specified in these documents. Third, adherence to the eight nationally agreed learning areas inhibits the proper representation of some content areas. Fourth, the attraction for focusing curriculum on cross-curricular essential learnings leads to the inclusion of general, rather than specific, content. Fifth, these factors contribute to a misunderstanding on the part of educators about the depth to which students should understand skills and concepts.

Concerns raised by representatives of professional associations and other education organisations prompted the Commonwealth Minister for Education, Science and Training to write to state and territory ministers expressing concern about the variations in the structures, curricula and certification practices between education systems. In June 2003, Minister Nelson released a statement calling for state and territory governments to establish greater national consistency between education systems by 2010. At its fifteenth meeting in July 2003, the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) considered a report on curriculum provision in the Australian states and territories, which
<table>
<thead>
<tr>
<th>Learning Area</th>
<th>Format of National Statement</th>
<th>Type of Standards</th>
<th>Release Date</th>
<th>Format of National Profile</th>
<th>Type of Standards</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td>knowledge, skills and processes organised by strands for grades 1 to 4, 4 to 7, 7 to 10 and 11 and 12</td>
<td>curriculum standards</td>
<td>1994</td>
<td>outcomes and pointers organised by strands for eight levels across grades 1 to 10</td>
<td>content standards, benchmarks and performance indicators</td>
<td>1994</td>
</tr>
<tr>
<td>English</td>
<td>knowledge, skills and processes organised by strands for grades 1 to 4, 4 to 7, 7 to 10, 11 and 12</td>
<td>curriculum standards</td>
<td>1994</td>
<td>outcomes and pointers organised by strands for eight levels across grades 1 to 10</td>
<td>content standards, benchmarks and performance indicators</td>
<td>1994</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>knowledge, skills and processes organised</td>
<td>curriculum standards</td>
<td>1994</td>
<td>outcomes and pointers organised by strands for eight levels across grades 1 to 10</td>
<td>content standards, benchmarks and performance indicators</td>
<td>1994</td>
</tr>
<tr>
<td>Languages other than English</td>
<td>Knowledge, skills and processes organised by strands for grades 1 to 4, 4 to 7, 7 to 10, 11 and 12</td>
<td>Curriculum standards</td>
<td>1994 outcomes and pointers organised by strands for eight levels across grades 1 to 10</td>
<td>Content standards, benchmarks and performance indicators</td>
<td>1994</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 (Cont.)

National Statements and Profiles

<table>
<thead>
<tr>
<th>Learning Area</th>
<th>Format of National Statement</th>
<th>Type of National Statement</th>
<th>Release Date</th>
<th>Format of National Profile</th>
<th>Type of Standards</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>knowledge, skills and processes organised by strands for grades 1 to 4, 4 to 7, 7 to 10, 11 and 12</td>
<td>curriculum or content standards</td>
<td>December 1990</td>
<td>outcome and pointers organised by strands for eight levels across grades 1 to 10</td>
<td>content standards, benchmarks and performance indicators</td>
<td>1994</td>
</tr>
<tr>
<td>Science</td>
<td>knowledge, skills and processes organised by strands for grades 1 to 4, 4 to 7, 7 to 10, 11 and 12</td>
<td>curriculum standards</td>
<td>1994</td>
<td>outcome and pointers organised by strands for eight levels across grades 1 to 10</td>
<td>content standards, benchmarks and performance indicators</td>
<td>1994</td>
</tr>
<tr>
<td>Studies of Society and Environment</td>
<td>knowledge, skills and processes organised</td>
<td>curriculum or content standards</td>
<td>1994</td>
<td>outcome and pointers organised by strands</td>
<td>content standards, benchmarks and performance indicators</td>
<td>1994</td>
</tr>
<tr>
<td>Technology</td>
<td>Knowledge, skills and processes organised by strands for grades 1 to 4, 4 to 7, 7 to 10, 11 and 12</td>
<td>Curriculum standards</td>
<td>1994 outcomes and pointers organised by strands for eight levels across grades 1 to 10</td>
<td>Content standards, benchmarks and performance indicators</td>
<td>1994</td>
<td></td>
</tr>
</tbody>
</table>
outlined approaches in each jurisdiction and identified common and different aspects. MCEETYA agreed to develop statements of learning setting out essential knowledge, understanding, skills and capacities for English, Mathematics, Science, and Civics and Citizenship. The statements of learning are intended to specify outcomes grouping knowledge, understanding, skills and capacities together to sequence progression in expected learning at particular points of schooling. MCEETYA directed the Australian Education Systems Officials Committee to complete development of the first Statement of Learning for English as a pilot project by February 2004, so that MCEETYA could consider the nature of further work to be undertaken in the other three areas in March 2004.

Curricula of the States and Territories
Following the referral of the national statements and profiles to the states and territories in July 1993, each system engaged in consultations within its own educational community to align them to its curriculum or to implement them. Systemic reform in New South Wales, leading to the passage of the Education Reform Act in 1990, had as an important element the definition of a core curriculum. This core curriculum became the paramount structure for organising the curriculum after the Review of Outcomes and Profiles in 1995 rejected aligning the syllabuses with the national statements and profiles. In Victoria and the Australian Capital Territory, existing curriculum frameworks were readily aligned to the national statements and profiles. South Australia and Tasmania, however, chose to implement the national statements and profiles in their existing forms, whilst the Northern Territory developed a curriculum derived from the recommendations of a review concluded in 1992. This position changed during the course of the 1990s. Curriculum reviews concluded in Queensland in 1994, Western Australia in 1995 and the Northern Territory in 1999 led to the development of syllabuses or curriculum frameworks based on the national statements and profiles. Systemic reforms concluded in South Australia in 1999 and Tasmania in 2000 also led to the development of curriculum frameworks based on the national statements and profiles. The titles, learning areas, levels, formats, release dates and revision processes for curriculum frameworks and syllabuses used in the states and territories are outlined in Table 4. The column reporting on types of standards presents the findings of the content analysis of outcomes in these documents.
<table>
<thead>
<tr>
<th>State or Territory</th>
<th>Title</th>
<th>Learning Areas</th>
<th>Levels</th>
<th>Format</th>
<th>Type of Standards</th>
<th>Release Date and Revision Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia Capital Territory</td>
<td>ACT Curriculum Frameworks</td>
<td>eight nationally agreed key learning areas</td>
<td>early years of schooling; lower primary; upper primary; high school; post compulsory</td>
<td>outcomes organised by strands</td>
<td>curriculum standards</td>
<td>1993; no revision process</td>
</tr>
<tr>
<td>State or Territory</td>
<td>Title</td>
<td>Learning Areas</td>
<td>Levels</td>
<td>Format</td>
<td>Type of Standards</td>
<td>Release Date and Revision Process</td>
</tr>
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<tr>
<td>New South Wales</td>
<td>Syllabuses</td>
<td>six key learning areas* (stages 1 to 3); eight key learning areas* (stages 4 to 6)</td>
<td>stages 1, 2, 3, 4, 5, 6</td>
<td>outcomes and indicators organised by strands</td>
<td>content standards, benchmarks and performance indicators</td>
<td>five key learning areas* (stages 1 to 3); three key learning areas* (stages 4 to 5); all key learning areas* (stage 6); revised periodically</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>NT Curriculum Framework</td>
<td>eight nationally agreed key learning areas; English as a Second Language; Indigenous Languages and Culture</td>
<td>key growth points 1, 2, 3; bands 1, 2, 3, 4, 5, beyond band 5</td>
<td>outcomes and indicators organised by strands</td>
<td>curriculum or content standards, benchmarks and performance indicators</td>
<td>2002; no revision process</td>
</tr>
<tr>
<td>Queensland</td>
<td>Syllabuses</td>
<td>eight nationally determined</td>
<td>foundation, key learning, curriculm</td>
<td>key learning</td>
<td>five key learning</td>
<td></td>
</tr>
</tbody>
</table>

*Denotes specific content areas or format specifications.
<p>| y agreed key learning areas; five subject syllabuses* | levels 1, 2, 3, 4, 5, 6, beyond level 6 | area, core learning and discretionary learning outcomes organised by strands | and content standards and benchmarks | areas*; revised periodically |</p>
<table>
<thead>
<tr>
<th>State or Territory</th>
<th>Title</th>
<th>Learning Areas</th>
<th>Levels</th>
<th>Format</th>
<th>Type of Standards</th>
<th>Release Date and Revision Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Australia</td>
<td>South Australia Curriculum Standards and Accountability Framework</td>
<td>three key learning areas* (birth to 3 years of age); seven key learning areas† (3 years of age to reception); eight nationally agreed key learning areas (reception to grade 12)</td>
<td>early years, primary years, middle years, senior years</td>
<td>key ideas and standards organise by strands</td>
<td>curriculum and content standards, benchmarks and performance indicators</td>
<td>2001; no revision process</td>
</tr>
<tr>
<td>Tasmania</td>
<td>Essential Learning Framework 1; Essential Learning Framework 2</td>
<td>key learning areas are not specified</td>
<td>foundations, standard s 1, 2, 3, 4, 5</td>
<td>key element outcomes organise by key elements</td>
<td>curriculum standard s, benchmarks and performance indicators</td>
<td>Essential Learning Framework 1, 2002; Essential Learning Framework 2, 2003; no revision process</td>
</tr>
<tr>
<td>Victoria Curriculum and Standards Framework</td>
<td>eight nationally agreed key learning areas; English as a Second Language</td>
<td>levels 1, 2, 3, 4, 5, 6, level 6 extension</td>
<td>learning outcomes and indicators organised by strands</td>
<td>content standards, benchmarks and performance indicators</td>
<td>1995; first revision, 2000</td>
<td></td>
</tr>
</tbody>
</table>
Table 4  
(cont.)

State and Territory Frameworks and Syllabuses

<table>
<thead>
<tr>
<th>State or Territory</th>
<th>Title</th>
<th>Learning Areas</th>
<th>Levels</th>
<th>Format</th>
<th>Type of Standards</th>
<th>Release Date and Revision Process</th>
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</thead>
<tbody>
<tr>
<td>Western Australia</td>
<td>Curriculum Framework for K to 12 Education in Western Australia; Outcomes and Standards Framework</td>
<td>eight nationally agreed key learning areas</td>
<td>early childhood, middle childhood, early adolescence, late adolescence/early adulthood (Curriculum Framework); levels 1, 2, 3, 4, 5, 6, 7, 8 (Outcomes and Standards Framework)</td>
<td>overarching and learning area outcomes organised by strands (Curriculum Framework); outcomes organised by strands (Outcomes and Standards Framework)</td>
<td>curriculum or content standards (Curriculum Framework); curriculum or content standards and benchmarks (Outcomes and Standards Framework)</td>
<td>1998 (Curriculum Framework and Outcomes and Standards Framework); no revision process</td>
</tr>
</tbody>
</table>

Key:
Key Learning Areas
New South Wales: Stages 1 to 3 - Creative and Practical Arts; English; Mathematics; Human Society and its Environment; Personal Development, Health and Physical Education; and Science and Technology. Stages 4 to 6 - Creative Arts; English; Mathematics; Human Society and its Environment;
Languages other than English; Personal Development, Health and Physical Education; Science; and Technological and Applied Studies.
Queensland: Subject Syllabuses - Agriculture Education; Business Education; Home Economics Education; Industrial Technology and Design Education; and Information and Communication Education.
South Australia: Birth to 3 years of age - Physical Self; Psychological Self; and Thinking and Communicating Self. 3 years of age to reception - Arts and Creativity; Communication and Language; Design and Technology; Diversity; Health and Physical Development; Self and Social Development; and Understanding our World.
Release Dates

Australian Capital Territory
Willis (1997) concluded that development of the ACT Curriculum Frameworks, and the implementation of the national profiles in Australian Capital Territory schools from 1994 to 1997 shifted curriculum planning from a focus on inputs to outcomes within the prevailing situation of school-based curriculum development. Beginning in 1984, the Australian Capital Territory Schools Authority developed curriculum frameworks after initiation of a five-year plan for curriculum review and renewal. Following a decision made to align the curriculum frameworks with the national statements in 1990, working parties of teachers merged the frameworks. After a system-wide consultative process, the ACT Curriculum Frameworks were published in December 1993. The ACT Curriculum Frameworks consist of component frameworks for the eight key learning areas, together with a companion Drug Education Framework. Each component framework presents an overview of the learning area, outcomes of the learning area organised by strands, a scope for the learning area, and a discussion of approaches for learning and teaching. The analysis of the outcomes listed in the ACT Curriculum Frameworks indicated that they are mainly curriculum standards.

The Australian Capital Territory Department of Education and Training consulted teachers across the Australian Capital Territory to identify perspectives they addressed in classrooms that were not included in the ACT Curriculum Frameworks. Following identification of nine cross-curricular perspectives, groups of curriculum specialists and teachers developed support papers on Aboriginal education and Torres Strait Islander education, Australian
education, environment education, gender equity, information access, language for understanding, multicultural education, special needs education, and work education, which were published in 1997.

New South Wales

Elitis and Mowbray (1997) traced the influence of outcome-based education on curriculum reform in New South Wales back to the Education Reform Act of 1990, which required the New South Wales Board of Studies to specify outcomes in syllabuses. From 1991 to 1993, syllabus advisory committees developed new syllabuses, which incorporated outcomes defined in terms of objectives and stages. In October 1993, the Minister for Education, Training and Youth Affairs required the Board of Studies to incorporate the national profiles into the syllabuses. In 1994, the Board of Studies consulted teachers about the suitability of draft outcomes, finding that there was general support for including outcomes in syllabuses. In May 1995, the newly elected Labor government initiated the Review of Outcomes and Profiles (New South Wales Department of Education and Training Coordination, 1995). The Review Panel recommended that profiles and levels should be replaced with outcomes based on stages. In 1996, the Board of Studies released two papers. Syllabus Model Using Staged Outcomes presented a model for developing syllabuses and support documents, and establishing an understanding of the place of outcomes in syllabuses. Assessing and Reporting Using Staged Outcomes outlined the use of outcomes in stages for assessing and reporting student achievement. Revised syllabuses for stages 1 to 3 were approved for English in March 1998, Human Society and its Environment in October 1998, Personal Development, Health and Physical Education in August 1999, Creative Arts in December 2000, and Mathematics in November 2002. Syllabuses for stages 1 to 3 consist of an introduction, a rationale, the aim and objectives, an overview of the subject, stage statements, outcomes and indicators organised by strands, content overviews for each stage, scope and sequence of the content, and general principles for planning, programming, assessing, reporting and evaluating. The analysis of the outcomes, presented in the syllabuses for stages 1 to 3 listed in Table 4, indicated that they are content standards. The content standards are expressed as benchmarks with performance indicators at the end of kindergarten, and grades 2, 4 and 6.

In 2000, the Board of Studies began developing the K to 10 Curriculum Framework to provide a basis for reviewing the primary and secondary syllabuses. Following consultation on the first draft, a revised draft was produced in March 2001 and then submitted for review by focus groups and organisations. Their responses indicated broad support for the direction established in the draft, particularly the move towards a standards-based approach to syllabus design. In October 2001, the Board of Studies approved a set of criteria to be used to ensure that standards of high quality are met by the syllabuses, and that the intentions of the K to 10 Curriculum Framework are
achieved. Published in March 2002, the K to 10 Curriculum Framework presents six principal elements. Syllabuses should present a clear understanding of the purpose of learning. Syllabuses should specify the broad learning outcomes essential for all students. The development of curriculum requirements and syllabuses should be guided by principles of student engagement, a core curriculum, explicit standards, inclusiveness, and maximising student learning. The curriculum should provide a K to 10 standards framework. Syllabuses should be developed according to a defined process and approved according to specified criteria. The Board of Studies is empowered by the Education Reform Act of 1990 to establish guidelines for courses of study. The key learning principles expressed in the K to 10 Curriculum Framework were influenced by a body of research indicating that curriculum and pedagogy should be considered together, if student learning outcomes are to be achieved effectively. They take account of conclusions based on research studies in the United States reported by Bransford et al. (1999), emphasising the importance of teaching students so that they develop the concepts and understandings that signal expertise in the courses they are studying.

The K to 10 Curriculum Framework guided the review and revision of the syllabuses for stages 4 and 5 commenced in September 2001. The elements referring to purpose, broad learning outcomes and principles were used to evaluate the existing syllabuses. Teams of teachers examined Board statistics on candidates, surveyed samples of schools, held focus group meetings with teachers and other groups, and reviewed literature to write evaluation reports for each syllabus. The Board Curriculum Committee used these reports to recommend directions for the revision of each syllabus. Writing briefs were prepared and distributed within the educational community for consultation. The revised writing briefs were then used to revise the existing syllabuses so they would reflect a contemporary understanding of teaching and learning emphasising outcomes, content and assessment for learning against standards. Following revisions of the draft syllabuses after consultations within the educational community, revised syllabuses for stages 4 and 5 were approved for English and Mathematics in October 2002, and Personal Development, Health and Physical Education in April 2003. Syllabuses for stages 4 and 5 consist of an introduction, a rationale, the place of the subject in the curriculum, the aim, objectives, the syllabus structure, outcomes, the continuum of learning, the content organising outcomes and content statements by strands, and information on assessment. The analysis of the outcomes presented in the syllabuses for stages 4 and 5 listed in Table 4 indicated that they are content standards. The content standards are expressed as benchmarks at the end of grades 8 and 10.

The development of syllabuses for stage 6 was affected by the Review of the Higher School Certificate initiated in 1995 with the publication of a discussion paper (McGaw, 1996). In a report on 38 public hearings and the analysis of
more than 1,000 submissions following a public review of the discussion paper, McGaw (1997) presented a report outlining 26 recommendations. Recommendation 3 proposed that syllabuses should present learning outcomes students are expected to achieve, and evidence that each learning outcome is set at an appropriate standard. Recommendation 21 proposed adopting a standards-referenced approach to assessment by developing achievement scales. Aquilina (1997) presented the state government's reforms to the Higher School Certificate, which accepted the major directions of the report including recommendations 3 and 21.

During the course of developing the syllabuses for the new Higher School Certificate between August 1998 and May 1999, outcome statements were written specifying the knowledge, skills and understanding students are expected to achieve. Performance scales were developed for each course to assist teachers and students understand the standards. Teams of teachers used past examination papers, student responses to examination questions and related statistical data to develop course performance scales. The course performance scales comprise six levels with descriptions of performance arranged hierarchically along a scale range of 0 to 100. A minimum standard expected is set for each course. Students are awarded a mark of 50 or more, if they reach or exceed the minimum standard. The performance bands describe what students at each level of achievement typically know and can do in a course. A comprehensive standards-setting process is undertaken as part of the marking operation to align the raw examination marks to the bands on the performance scale. The aim of the standards-setting process is to determine which raw examination marks relate to standards at each borderline between bands. For each course, a team of experienced markers is created. After becoming familiar with the band descriptions, each marker works independently to develop an image of the knowledge and skills of students whose achievement would place them in each performance band in that course. The markers then meet to discuss their decisions, and to reach a common image about borderline students. The markers then review a sample of students' responses to ensure that the chosen cut-off marks reflect the standards at each borderline position on the scale. The Board of Studies' Consultative Committee approves the final cut-off marks, together with the minimum and maximum marks to be awarded for each course. The principles outlined by Black and Wiliam (1998) formed a major influence on the Board of Studies' work in standards-based curriculum and assessment.

Northern Territory

Jacob (1997) concluded that a pilot project for trialing the national profiles for English and Mathematics in Northern Territory schools from 1995 to 1998 shifted curriculum planning from a focus on inputs to outcomes. An outcome of the pilot project led to the development in 1997 of the Northern Territory Outcomes Profiles based on only one outcome for each level across each
strand. Implementation of the Northern Territory Outcomes Profiles in 1998 led the Northern Territory Board of Studies to publish a Common Assessment and Reporting Statement, providing a framework for schools to plan, develop and implement their own policies in relation to assessing and reporting student achievement. In 1998, the Northern Territory Board of Studies revised the Common Curriculum Statement, developed in 1992, to reflect the adoption of the nationally agreed learning areas, and to provide a framework for schools to implement the common curriculum in terms of balance among the learning areas and across curricular perspectives. Early in 1999, the Northern Territory Board of Studies published a Learning Area Statement for each of the eight learning areas, which described the content and essential outcomes of the common curriculum.

A review of education in the Northern Territory initiated in September 1998 led the Northern Territory Department of Education (1999) to release a discussion paper proposing that the Common Curriculum Statement, the Common Assessment and Reporting Statement, and the learning area statements should be replaced by a curriculum framework. Appointed in December 1999, a Curriculum Framework Team disseminated an information pack in January 2000, to which each school nominated its degree of involvement in the review. The first phase of the review involved distributing an options pack to schools outlining key elements for the proposed framework in March 2000. The options pack was revised by the Curriculum Framework Team on the basis of responses, and distributed to all schools in April 2000. The second phase involved appointing focus groups, each consisting of a contributing team and a field-testing team, for the eight learning areas, five bands, six areas of student diversity, and four cross-curricular areas. Following receipt of responses to the second distribution, the contributing teams revised the options pack in August 2000 to form a field-testing version. The field-testing version was revised on the basis of the responses to form a pilot version, which was piloted in more than 90 schools during February and March of 2001. The pilot version was revised, and presented for public review by parents, business and industry groups in July 2001. Following an evaluation of the final draft by the Curriculum Corporation in November 2001, the Northern Territory Board of Studies approved the NT Curriculum Framework in March 2002. Published in 2002 by the Northern Territory Department of Employment, Education and Training, the NT Curriculum Framework consists of components on essential learnings, learning technology, English as a second language, the eight learning areas, and indigenous languages and culture. Each learning area statement organises outcomes and indicators by strands. The analysis of the outcomes presented in the NT Curriculum Framework indicated that they consist of a mixture of curriculum and content standards expressed as benchmarks with performance indicators at the end of grades 2, 4, 6, 8, 10 and an extension level.
In September 2000, William Spady worked with the Curriculum Framework Team and Northern Territory teachers over a six-day period to apply his model of outcome-based education to shape the essential learnings’ component of the NT Curriculum Framework. Other aspects of Spady’s work to influence the NT Curriculum Framework included life role performances, authentic assessment and the concept of learner-centred outcome-focused learning.

Queensland
Grace and Ludwig (1997) reported that the shift from inputs to outcomes occurred in Queensland, when student performance standards were developed to support the Mathematics syllabus, published in 1987, and the English Language Arts syllabus then being developed. However, the Labor government appointed a four-member panel in November 1992 to review the curriculum. In its report, the Review of the Queensland School Curriculum (1994) recommended that the structures for managing the curriculum should be changed, new syllabuses should be based on the national statements and profiles, and student learning outcomes should be incorporated into the new syllabuses. Although the state government established the Queensland Curriculum Council to design a strategic plan based on these recommendations and the Queensland School Curriculum Office to implement the strategic plan, these two bodies were merged to form the Queensland School Curriculum Council in December 1996. Following a decision taken by the Queensland government in September 2001, the Queensland parliament legislated in February 2002 to amalgamate the Queensland School Curriculum Council, the Queensland Board of Senior Secondary School Studies, and the Tertiary Entrance Procedures Authority to form a new agency. The Queensland Studies Authority commenced operations in July 2002.

Since syllabuses for Mathematics and English had been published in 1987 and 1994, the Queensland School Curriculum Council developed new syllabuses and sourcebooks for the remaining six key learning areas. The syllabuses for Science, and Health and Physical Education were published in 1998. The syllabus for Studies of Society and Environment and subject syllabuses for Civics, Geography and History, and Languages other than English for Chinese, French, German, Indonesian, Italian, Japanese and Korean were published in January 2000. Draft curriculum guidelines for Languages other than English for grades 1 to 3 were published in December 2000. Syllabuses were published for Technology in March 2002 and the Arts in June 2002. The syllabuses consist of three sections. The rationale explicates the nature of the key learning area, the contribution of the key learning area to lifelong learning, cross-curricular priorities, and understandings about learners and learning. Outcomes define the concepts within the framework, organise key learning area, core learning and discretionary learning outcomes by strands, and present guidelines for using outcomes for planning and assessment. Assessment presents the principles for assessment, application of assessment
principles, and making judgments and reporting. The sourcebooks, which provide the basis for planning units of work, consist of guidelines for teachers and modules presenting lesson plans. The analysis of the outcomes presented in the syllabuses listed in Table 4 indicated that the key learning area outcomes are curriculum standards, whilst the core learning and discretionary learning outcomes are content standards. The core learning and discretionary learning outcomes are expressed as benchmarks at the end of grades 1, 3, 5, 7, 9, 10 and an extension level. In April 1999, the Queensland School Curriculum Council approved the development of subject syllabuses for Agriculture Education, Business Education, Home Economics Education, Industrial Technology and Design Education, and Information and Communication Education at levels 5 and 6. Commencing in January 2000, a series of drafts for the five subject syllabuses were developed, reviewed within the educational community, and then revised.

Although the principles of outcome-based education have informed the development of learning outcomes in the syllabuses, a three-tiered hierarchy of learning outcomes evolved through consultation within the educational community about the needs of Queensland schools. Overall learning outcomes contain elements common to all learning areas, and describe the valued attributes of a lifelong learner. Key learning area outcomes describe intended results of extended engagement with the learning described by core learning and discretionary learning outcomes. Core learning outcomes describe essential learnings, what students should know and do with what they know, whilst discretionary learning outcomes describe what students should know and do with what they know beyond what is essential.

South Australia

Stehn (1997) concluded that the use of the national statements and profiles in South Australian schools from 1994 to 2000 shifted curriculum planning from a focus on inputs to outcomes. However, the development of a curriculum framework arose from three curriculum documents: the Foundation Areas of Learning; the national statements and profiles; and the South Australian Certificate of Education. The South Australia Department of Education and Children’s Services (1997) published a declaration affirming the agency’s fundamental purpose by establishing five strategic directions: developing the individual and society; achieving unity through diversity; strengthening community; creating a spirit of enterprise; and becoming global citizens. In order to reflect the philosophical and educational parameters articulated in the declaration, a discussion paper was released for consultation to determine the design and format of a curriculum statement. Following conclusion of the review in July 1998, a group of writers used the responses to revise the statement presented in the discussion paper. The statement presented a rationale for integrating the use of existing curriculum documents to provide the basis for a curriculum framework.
After establishing a new policy on devolving decision-making responsibilities to local school communities, a project was initiated to align the rationale presented in the statement with the new policy. The project involved consulting teachers across South Australia in May 1999 about the existing curriculum documents to provide an information base to develop a curriculum framework. In November 1999, a writing team developed the first draft for the curriculum framework, which was evaluated by the Erebus Consulting Group by surveying the educational community. The report of the evaluation was used to develop a second draft, which was trialed in a sample of schools, and reviewed across the state education system. Data gathered from the trials were used to develop the South Australian Curriculum Standards and Accountability Framework, which was approved in December 2000.

The South Australian Curriculum Standards and Accountability Framework consists of sections covering scope, standards and accountability. The scope consists of three component frameworks covering four bands. Three learning areas from birth to 3 years cover the first stage of the early years' band. Seven learning areas from 3 years to reception cover the second stage of the early years' band. Eight learning areas from reception to year 12 cover the third stage of the early together with the primary, middle and senior years' bands. Each component framework organises key ideas and standards by strands. The standards are specified at six levels. The accountability section outlines assessment and reporting policies. The analysis of the key ideas presented in the South Australian Curriculum Standards and Accountability Framework indicated that they are curriculum standards. In addition, content standards are expressed as benchmarks with performance indicators at the end of grades 2, 4, 6, 8 and 10.

Stehn (1999) identified that a range of eclectic influences affected the development of the South Australian Curriculum Standards and Accountability Framework. Foremost among the influences that guided development of the South Australian Curriculum Standards and Accountability Framework was a constructivist approach, the view that the learner is active in the process of information and building knowledge and understanding, which had been promoted by the influential educator, Garth Boomer. The constructivist approach is evident in the prominent place given to essential learnings, understandings, capabilities and dispositions developed throughout a person's life. Approaches to student assessment were influenced by outcome-based education, implicit in the national profiles. In the birth to age 5 range, there are broad, developmental learning outcomes describing a child's learning over time. From reception to year 10, there are standards defined at points, which provide a common reference point for monitoring, judging and reporting student achievement. Year 12 standards relate to standards provided by the external assessment board used in conjunction with the essential learnings.
Tasmania
Pullen (1997) reported that the use of the national statements and profiles in Tasmanian schools from 1994 led to projects in literacy and numeracy, which produced sets of key intended outcomes derived from the national profiles. However, curriculum reform arose as an element of a policy statement on education, itself a component of Tasmania Together, a strategy intended to develop a twenty-year social, environmental and economic plan for the state. Following a series of meetings within the educational community in 1999, draft proposals for education, training and information provision were released for public review in February 2000. Analysis of more than 160 responses led to the formulation of five goals, which were incorporated into a policy statement (Tasmania Department of Education, 2000). The policy statement presented a long-term plan for transforming the education system, including the development of a curriculum framework.

A Consultation Team was appointed to conduct a three-year review of the curriculum consisting of three phases: clarifying values and purposes; specifying content; and developing teaching and assessment practices. Beginning in June 2000, district reference groups led more than 6,900 teachers, childcare professionals, business people, community members and students at meetings focusing on clarifying the values and purposes of public education. The report on the consultation, released in October 2000, led to the publication of a statement in December 2000 identifying seven values and six purposes as important. The statement of values and purposes formed the basis for developing an initial draft of ‘emerging’ essential learnings, organised into four categories of working organisers. Responses collected from a review were used to revise the initial draft to produce ‘working’ essential learnings consisting of five categories, each containing a description and several key elements. Twenty partnership schools, selected in November 2000, worked with the Consultation Team to refine the ‘working’ essential learnings, determine outcomes and standards to describe knowledge, skills and competencies, and identify teaching and assessment practices consistent with the values and purposes.

In March 2002, Essential Learnings Framework 1 presenting a statement of values and purposes, descriptions and key elements of the essential learnings, culminating outcomes for the essential learnings, and a set of learning, teaching and assessment principles, was released. More than 40 schools worked with the Consultation Team during 2002 to specify sets of expectations for students at different levels to provide the basis for the outcomes and standards statement. Released in March 2003, Essential Learnings Framework 2 consists of three components. The Introduction to Outcomes and Standards outlines the structure of the framework and describes support available to assist teachers. Outcomes and Standards
organise key element outcomes by the key elements of the essential learnings. The Learners and Learning Provision Statement discusses some key advances in the understanding of how learning occurs, and what is known about the distinctive features of learners at different stages in their intellectual development. The analysis of the key element outcomes presented in Essential Learnings Framework 2 indicated that they are curriculum standards. These curriculum standards are expressed as benchmarks with performance indicators at the end of kindergarten, and grades 2, 5, 8 and 10. Developed by the Consultation Team and 53 partnership schools, the Learning, Teaching and Assessment Guide presents guidelines for effective teaching, student assessment, professional development, school-based curriculum planning, and parental and community involvement.

The policy statement also proposed convening an international conference in 2002 to showcase aspects of education in Tasmania. A survey of schools across Tasmania in September 2001 led to 50 schools responding with suggested topics or issues for the conference, whilst three regional committees considered the best ways to organise the conference to ensure representation of presentations across Tasmania. Convened in Hobart, Launceston and Burnie over ten days in July 2002, the Leading Learning conference hosted keynote speakers from Australia, the United Kingdom and the United States, including a representative from Harvard University’s Project Zero, who discussed the features of the project. In addition, over 80 schools opened their doors to hold more than 100 workshops to share innovative and successful programs with more than 5,000 participants. These presentations focused on a range of issues concerning the curriculum consultation and the vision for schools of the future.

Victoria
A review of the Curriculum and Standards Framework, published in 1995, was initiated in May 1998 to reduce its content by paying attention to curriculum quality and coherence, international best practice in benchmarking, the importance of information technologies, research on teaching and learning, community expectations, and the structure of reporting. The ten-member CSF 2000 Advisory Committee, appointed to oversee the eighteen-month review, produced a direction’s paper, which formed the basis for consulting the educational community. Using the responses, CSF Key Learning Area Committees revised the eight key learning areas over a six-month period commencing in October 1998. In April 1999, the revised draft was distributed to schools for a field review. Over 700 responses to a questionnaire survey, received from all sectors of education across Victoria, were overwhelmingly positive about the draft. Published by the Board of Studies Victoria in 2000, Curriculum and Standards Framework II consists of component frameworks for the eight key learning areas, together with a companion document for English as a Second Language. Each component
framework organises learning outcomes and indicators by strands. The learning outcomes and indicators are specified at six levels. The analysis of the learning outcomes presented in the Curriculum and Standards Framework II indicated that they are content standards expressed as benchmarks with performance indicators at the end of grades 2, 4, 6, 8, 10 and an extension level.

Following the release of the draft Curriculum and Standards Framework II, curriculum specialists compared the learning outcomes with the outcomes in the original Curriculum and Standards Framework to identify which units in the Course Advice documents needed to be revised or replaced. Approximately 50 writers, contracted in June 1999, completed revisions to the Course Advice documents in November 1999. Containing suggested learning activities, curriculum resources, and assessment techniques linked to Curriculum and Standards Framework II by outcome codes, the Course Advice documents were revised for each key learning area and English as a Second Language, and released on a CD-ROM in October 2000. Teachers, who are designated trainers in the use and application of the CD-ROM, provide workshops for teachers across Victoria on its use for curriculum planning.

As part of the review, the Board of Studies Victoria commissioned the Melbourne-based consulting group Education Strategies to benchmark the learning outcomes for English, Mathematics and Science in the Curriculum and Standards Framework against other curriculum documents with regard to their detail, degree of ambiguity, measurability and conceptual content. For English, the Curriculum and Standards Framework was compared to the New Standards Project, the New Zealand Curriculum Framework, the New South Wales syllabuses, the National Curriculum for England and Wales, and the California Content Standards. For Mathematics, the Curriculum and Standards Framework was compared to the Singapore syllabuses, the Curriculum Guidelines for Japan, the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia, the National Curriculum for England and Wales, and the California Content Standards. For Science, the Curriculum and Standards Framework was compared to the Singapore syllabuses, the Ontario Curriculum, the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia, the National Curriculum for England and Wales, and the California Content Standards. The Board of Studies Victoria (1998) reported that the Curriculum and Standards Framework compared favourably with these documents by introducing topics in a similar way, increasing complexity of topics across levels, and being detailed, unambiguous, measurable and presenting conceptual content.

In June 1999, the Board of Studies hosted a symposium, Setting Standards for Our Students: Ensuring High Level Achievement, at the Melbourne Business School. The symposium provided a forum for policy-makers and education
leaders to learn more about the role of standards-based reform in the United States in improving student achievement, and advancing practice in this area with application to schools. Curriculum leaders from schools, regional offices and other states heard four keynote speakers discuss the importance of setting standards to ensure high quality student achievement. Robert Schwartz, president of the Achieve Resource Center on Standards, Assessment, Accountability and Technology for Governors, outlined the standards movement in the United States identifying six key issues. The variable quality of content standards needs to be supported by performance standards. Little experience is available in developing standards-based curriculum. Models for professional development need to be designed to support standards-based reforms. Teacher preparation programs need to become more relevant to standards-based education. Assessment systems need to be aligned more closely to standards. Public support for standards-based reforms needs to be sustained. Then director of standards development and applied learning for the National Center on Education and the Economy, Ann Borthwick commented on the New Standards Project. She emphasised its role in translating content standards into performance standards, and assembling representative samples of student work. Work in translating the standards produced in the New Standards Project to meet the requirements of school systems in New York City was dited as a significant outcome of the project. Geoff Masters, director of the Australian Council for Educational Research, and Peter Hill, then director of the Centre for Applied Educational Research at the University of Melbourne, commented on outcome-based education in Australia. Masters reported that the development of outcomes in Australia was focused on seven issues. Outcomes should make explicit what is valued, describe learning outcomes, delineate the direction of intellectual development, be informed by evidence, be illustrated with samples of student work, provide a framework for monitoring growth, and furnish a basis for dialogue. Hill emphasised the need to define performance standards that make explicit standards implied in expected outcomes, establish realistic targets, put in place improvement strategies to meet the targets, and review the targets periodically. The Board of Studies published a summary report of the symposium drawn from the keynote presentations and issues raised in panel discussions (Board of Studies Victoria, 1999).

In May 2003, the Minister for Education and Training delivered a speech calling for reform of the education system by examining the curriculum in schools, school improvement, teacher training and professional development, and the climate for promoting innovation and excellence. Four leadership groups were formed to provide advice for the development of a ministerial statement presenting an agenda for reform to 2010. Early in August 2003, the leadership groups on the curriculum in government schools, excellence and innovation, school improvement, and teacher learning released directions' papers for public comments. When the leadership groups released papers
presenting their findings and recommendations late in August 2003, the Leadership Group on the Curriculum in Government Schools made six recommendations. A framework of essential learnings should be developed reflecting community beliefs. A stronger focus should be established on teaching and learning. An accountability framework should be established. Creative and flexible learning opportunities should characterise the school curriculum. Partnerships should be formed with parents and community members. Provision of resources should reflect requirements of the school curriculum. Informed by the findings and recommendations of the leadership groups, the ministerial statement to be released in October 2003 is expected to ask the Victorian Curriculum and Assessment Authority to review Curriculum and Standard’s Framework II.

Western Australia
Randall (1997) reported that the shift from inputs to outcomes occurred in Western Australia, when student outcome statements were developed in the eight learning areas and trialed in schools over two phases in 1992, and again in 1994 and 1995. The second trial led to student outcome statements reference groups refining the student outcome statements to ensure their congruence with the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia. In 1998, the Education Department of Western Australia published the Outcomes and Standards Framework presenting the student outcome statements organised into the eight learning areas by strands specified at eight levels. The framework for each learning area is preceded by a chart cross-referencing the learning outcomes in the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia with the strand descriptors for the student outcome statements in the Outcomes and Standards Framework. The analysis of the outcomes presented in the Outcomes and Standards Framework indicated that they are content standards. The content standards are expressed as benchmarks that are not grade-related. Teachers use the Outcomes and Standards Framework to inform planning of educational programs, and to assess and report on student achievement.

In June 1994, the Minister for Education appointed the Ministerial Committee to Review Curriculum Development to review current processes, examine future options, and evaluate the financial implications and accountability of its recommendations. Consisting of a two-stage process, the review involved evaluating existing curriculum provisions and deriving a set of recommendations, and then preparing an organisational model and implementation plan. In its report, the Western Australia Ministerial Committee to Review Curriculum Development (1995) recommended that a curriculum council should be formed to develop a curriculum framework. Consisting of an overarching statement of the whole curriculum together with learning area statements, the curriculum framework and support documents should specify learning outcomes.
Appointed by the Interim Curriculum Council formed in June 1996, learning area committees developed a draft framework in April 1997. The draft framework was distributed to teachers and interest groups in July 1997 for a six-month review involving a series of public meetings, focus group sessions and a student forum. A survey identified from more than 1,800 responses that whilst the respondents agreed the curriculum framework would enable more effective curriculum planning, there were features that some respondents wished to be changed, and that its implementation would require extensive professional development. Revised over six months by the Curriculum Framework Committee, the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia was approved and published in 1998 by the Curriculum Council of Western Australia, which had been established in August 1997. The Curriculum Framework for Kindergarten to Year 12 Education in Western Australia consists of an overarching statement and eight learning area statements. The overarching statement outlines seven key principles and thirteen overarching learning outcomes to which all learning areas contribute. A further 66 learning outcomes are specified in the learning area statements: four in the Arts; nine in English; five in Health and Physical Education; six in Languages other than English; nineteen in Mathematics; nine in Science; seven in Society and Environment; and seven in Technology and Enterprise. The analysis of the overarching and learning area outcomes presented in the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia indicated that they consist of a mixture of curriculum and content standards.

With the publication of the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia, it became necessary to determine if the existing system of post-compulsory education was compatible with its intentions. In August 1998, the Curriculum Council of Western Australia appointed the Vision Implementation Working Group, which determined the directions for a Post-Compulsory Review. In consultation with a Community Reference Group, a Student Reference Group and several focus groups, the Vision Implementation Working Group examined the extent to which post-compulsory courses could be aligned to the outcomes, and released a discussion paper in October 1999. Review of the discussion paper involved 350 information sessions and the collection of 600 submissions. Analysis of the responses led to recommendations that a single curriculum structure of approximately 50 courses of study should be aligned to the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia. After an eight-month review involving information sessions, public meetings and exploratory course of study activities, the recommendations were revised on the basis of responses to an on-line survey and written submissions, and published by the Curriculum Council of Western Australia (2001). In response, the Minister released a report in March 2002 supporting the development of approximately 50 courses of study aligned to the Curriculum Framework for
Conclusion

The processes of national curriculum collaboration in Australia and standards-based reforms in the United States show more similarities than differences. National curriculum collaboration constituted a central element of the Common and Agreed National Goals for Schooling in Australia released by the Australian Education Council in April 1989 as part of the Hobart Declaration on Schooling. The national standards arose from the core curriculum of five basic subjects incorporated in the six National Education Goals expounded following the Charlottesville Education Summit convened by President George Bush in September 1989. However, policy-makers in Australia entrusted a national curriculum agency to develop the national statements and profiles, a closed process that provided only limited consultation with the wider community. This situation contrasted with the United States, where nationally recognised groups developed national standards for particular subject areas in consultation with the wider community, but largely independent from the work of other subject-based groups. The federal systems of government prevailing in both countries acted against national curricula being adopted.

The action of the Australian Education Council and the Ministers for Vocational Education, Employment and Training in July 1993 of referring the national statements and profiles to the states and territories for endorsement ensured that a prescriptive national curriculum, which overrode states’ rights, was not adopted. The tradition of local control and state responsibility for education in the United States hindered the rise of a strong movement for developing a national curriculum, in spite of there being considerable public support during the late 1980s and early 1990s for national initiatives in curriculum reform.

State-level policy-makers in Australia and the United States were constrained by similar impediments from utilising the work produced at the national levels. The incorporation of the principles embodied in the national statements and profiles into the curricula of the states and territories in Australia represented a critical challenge for state-level policy-makers, especially in light of inadequate information provided by national authorities about the quality of their curriculum documents. Although the Curriculum Corporation surveyed state and territory education agencies in 1994, 1995 and 1996 to identify approaches being taken by the Australian states and territories to implement the national statements and profiles, the data collected only provided information about the progress of implementation. The translation of the national standards by state-level policy-makers and others in the United States into state standards represented the most critical challenge for developing curricula around clearly defined sets of expectations, and assessment systems that measured whether students are meeting these expectations. In spite of
the demise of a proposal to establish the National Education Standards and Improvement Council with authority to certify state standards, this role was assumed in a de facto fashion by several organisations. They issued reports viewed by many policy-makers and educators as offering endorsements on the progress and quality of state standards.

The findings of these reports indicated that the quality of the standards and curricula in the various states in the United States has improved, although considerable disparity remains between different states. On the basis of reports issued in 1995, 1996, 1997, 1998, 1999 and 2001, the American Federation of Teachers focused on nine findings. First, the commitment to standards-based reform in the states continued to remain strong. Second, the quality of state content standards improved over time. Third, states had more difficulty in developing strong content standards for English and Social Studies than for Mathematics and Science. Fourth, most states were committed to measuring student achievement towards content standards. Fifth, many states described the level of mastery students must demonstrate to meet state standards. Sixth, few states sought to end social promotion. Seventh, high school examinations were based on standards for grade 10 in some states. Eighth, some states developed incentives to motivate students to achieve higher standards than those required for all students. Ninth, some states required or funded intervention programs to assist low-performing students. On the basis of two reports issued in 1998 and 2000, the Thomas B. Fordham Foundation found improvements in state standards in three areas. First, state standards were becoming more specific and measurable. Second, states showed greater willingness to specify particular knowledge students should know, especially in History and Geography. Third, states became less enamoured with national standards promulgated by professional associations for English, History and Mathematics.

The findings of the analysis of curriculum documents produced at the national and state levels in Australia indicate that a similar picture of improvement in the quality of standards and curricula has occurred, although disparity in quality exists between different jurisdictions. These differences are often disguised by the perception that curriculum development in Australia proceeds uniformly according to principles espoused by outcome-based education. Education leaders and curriculum developers sometimes refer to these principles as providing ‘outcome-focused learning’. For instance, the Curriculum Council of Western Australia states that the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia presents an ‘outcomes approach’. The Queensland School Curriculum Council describes curriculum development in that state produces ‘outcomes-focused syllabuses’. The Northern Territory Department of Employment, Education and Training states that the NT Curriculum Framework presents an ‘outcomes-focused approach’. Although the curriculum documents from the other states and territories fail to
make explicit statements of this sort, they are likely to leave curriculum planners and teachers with superficial impressions that similar principles underpin their documents.

The analysis of the curriculum documents produced as a consequence of national curriculum collaboration in Australia suggests that they may not present such a homogenous picture. The historical evidence suggests that the principles underpinning the national statements and profiles were derived mainly from curriculum practices inherent in the National Curriculum being developed at that time for England and Wales. A pilot project conducted from 1988 to 1990 to develop a national statement for Mathematics provided the model for using a ‘curriculum map’, produced by screening curriculum documents used across Australia, to define the principles and content for particular learning areas. The conceptual framework for the national profiles was first presented in a document released by an Australian Cooperative Assessment Program working party in October 1990. Chaired by Garth Boomer, the working party was influenced by his view that an outcome-based approach could be formulated within levels of attainment derived from teacher-centred standards (Ellerton and Clements, 1994; Marsh, 1994). Furthermore, the analysis of these documents revealed that the format and content of some of the national statements resemble the statutory orders for the National Curriculum, suggesting that the latter documents were a prominent influence on the national statements. The organisation of both the national profiles and the attainment targets in the National Curriculum into levels also suggests a common derivation. On the other hand, the specification of the national profiles as outcomes and pointers is so profoundly different to the specification of the attainment targets in the National Curriculum to suggest that another source, outcome-based education, was becoming an important influence at this time.

The analysis of the curriculum frameworks and syllabuses produced by the Australian states and territories showed that the statements of rationale presented in these documents are substantially different from those presented in the national statements and profiles. They may be classified along a continuum to form two distinct classes at the extremes. The analysis confirmed that whilst the ‘outcomes focus’ in some documents suggests that the influence of outcome-based education may be paramount, most of the other documents showed a close affinity with standards-based education.

The NT Curriculum Framework, the South Australian Curriculum Standards and Accountability Framework, the Essential Learnings Framework, and the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia fall into the former category. Outcomes in these documents are often expressed in an unmeasurable form, rather than as measurable content standards, cover affective and psychomotor as well as cognitive behaviours, and are organised
into interdisciplinary or non-disciplinary topics as essential learnings. The NT Curriculum Framework specifies outcomes for interdisciplinary essential learnings referring to the Inner, Communicative, Collaborative, and Constructive learner, and references these outcomes to the outcomes within each learning area. The South Australian Curriculum Standards and Accountability Framework references interdisciplinary essential learnings for Futures, Identity, Interdependence, Thinking and Communication to key ideas within each learning area. The Essential Learnings Framework specifies key element outcomes for the non-disciplinary essential learnings of Thinking, Communicating, Personal Futures, Social Responsibility and World Futures. The Curriculum Framework for Kindergarten to Year 12 Education in Western Australia does not define essential learnings, suggesting that it may fall near the midway point on the continuum. However, it references links across the curriculum between the overarching statement and the learning area statements, and within the learning area statements. The New South Wales syllabuses, the Queensland syllabuses, and the Curriculum and Standards Framework fall into the latter category. Outcomes in these documents are usually expressed in a measurable form as content standards, focus content standards on cognitive learning, and base content standards on traditional academic disciplines.

The analysis of these curriculum documents intimates that the philosophic position on education held by curriculum developers in the smaller states and territories reflects the principles of outcome-based education, whilst curriculum development in the more populous states seems to be evolving towards standards-based education. In most cases, it is difficult to attribute these effects to particular external sources. Although William Spady reported working with educators in Queensland, South Australia and the Northern Territory, his involvement in developing the NT Curriculum Framework represents the only direct influence of an advocate of outcome-based education on curriculum development in Australia. Similarly, the involvement of advocates of standards-based education in the process of revising the Curriculum and Standards Framework in Victoria represents the only direct influence of standards-based education on curriculum development reported in Australia. In the information age, when the exchange of curriculum information between different countries has increased at an expeditious rate, it is likely that curriculum developers have solicited information from diverse sources. This conclusion is evident from an examination of bibliographies in those documents that provide them, showing that references are most commonly made to publications on curriculum reforms in Australia, but also to outcome-based education and standards-based education in the United States. Undoubtedly, curriculum developers screen the range of available publications, selecting references on the basis of compatibility with their particular philosophic positions on education.
Although there is no intention within this paper to judge the quality of standards represented in outcomes presented in these curriculum documents, five issues with qualitative implications identified during the course of this study should be raised. First, the assumption that a coherent philosophic position on education underpins the national statements and profiles lacks foundation. The analysis of these documents showed that not only the development of the statements and the profiles was guided by an eclectic approach, but that the knowledge, skills and processes presented in the national statements are not outcome-based. Second, the initiative to develop statements of learning appears to be an attempt to shift curriculum development away from the definition of vague, and inherently unmeasurable, outcomes towards clear and measurable content standards based on cognitive learning. The form that the statements of learning take is likely to have a profound effect on whether curriculum documents in Australia continue to follow the principles of outcome-based education or assume a standards-based approach. Third, the ACT Curriculum Frameworks, developed at the same time as the national statements and profiles, perpetuate the inconsistency of this eclectic approach to curriculum development. Fourth, the integration of the Curriculum Framework for Kindergarten to Year 12 Education in Western Australia and the Outcomes and Standards Framework would remove the need for teachers in Western Australia to follow the cumbersome practice of aligning outcomes between separate documents. Fifth, the use of consensus building to define the common core of learning found in the Essential Learnings Framework represents an extreme form of adherence to the principles of outcome-based education. It is questionable whether it is feasible to specify measurable content standards from the non-disciplinary outcomes presented in the Essential Learnings Framework without substantial work being done to define the knowledge and skills for learning areas based on traditional academic disciplines.

This review identified that curriculum development in Australia no longer proceeds uniformly according to principles espoused by outcome-based education. It showed that the practices of standards-based education are becoming entrenched in curriculum development occurring in New South Wales, Queensland and Victoria. It also suggested that the principles of standards-based education could underpin the initiative to develop statements of learning at the national level. The difficulty in providing definitive conclusions about this issue lies in the failure of education authorities in Australia to develop criteria to assess the nature and quality of outcomes in curriculum documents. Independent evaluations of standards could be important for identifying the strengths and weaknesses in the quality of outcomes in curriculum documents, but also for clarifying the philosophic positions on education held by curriculum developers. Forming a cadre of educators to evaluate standards in curriculum documents may offer policymakers with the best hope of resolving competing needs to identify essential
learnings and to specify rigorous academic standards, thereby avoiding the possibility of curriculum development in Australia being held hostage to incompatible ideologies.
Glossary

Benchmarks refer to sub-components of standards specified at particular developmental levels.

Content standards refer to the knowledge and skills essential to a discipline that students should know and be able to do.

Curriculum standards refer to teaching and learning methods, and activities that should take place in the classroom.

Opportunity-to-learn standards, which address conditions necessary at each level of the education system to provide all students with opportunities to master content standards and meet performance standards, provide criteria covering six elements. These elements refer to the quality and availability of curricula, materials and technology, the capability of teachers to meet learning needs, the availability of professional development, the alignment of the curriculum to content standards, the adequacy of school facilities for learning, and the application of non-discriminatory policies.

Performance standards specify how competent a student demonstration must be to indicate attainment of content standards by distinguishing between adequate and outstanding levels of performance.

Performance indicators refer to examples of attainment towards achieving a standard at particular developmental levels.

Pointers (see performance indicators).
References


