

CERTIFICATION SYSTEMS

IN THE

SENIOR SECONDARY SCHOOL

SOME

INTERNATIONAL PERSPECTIVES

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CERTIFICATION SYSTEMS IN THE SENIOR SECONDARY SCHOOL: SOME INTERNATIONAL PERSPECTIVES

Introduction

Over the past 15 years, a number of countries have reformed or reviewed secondary certification systems. In addition, many jurisdictions are currently reconsidering various aspects of current qualification arrangements¹, others are about to develop national qualification frameworks from scratch² and some have gone through one or several waves of systemic reform³. These initiatives have had several objectives, which include:

- to provide for the growing retention of students to senior secondary levels;
- to better align curriculum with assessment;
- to make occupational qualifications more visible and more relevant for employers; and
- to render education and training pathways more accessible and more coherent for young people and for adults.

New Zealand, therefore, is but one of a number of countries reviewing its secondary certification policies.

There is a good deal to be learnt from sharing experiences - successes as well as difficulties - in developing national qualification systems, and from comparing the policy objectives and policy processes underlying different designs⁴. A global economy and workforce gives further impetus for understanding and comparing qualifications from various countries.

This paper selects international examples to illustrate the timing and nature of certification, the forms of assessment used to award qualifications and certificates, curriculum effects, and the use of standards as a basis for assessing and reporting achievement. The paper concludes by noting the reforms under way in some countries.

Variations between countries

Although the purposes for secondary certification have much in common from one country to another, there are also differences, and there is considerable diversity amongst the strategies used for assessment and reporting. This is highlighted where certification practices differ between adjacent jurisdictions within a single landmass. In Queensland and Ontario, senior certification is based on school-based assessment, while their neighbours NSW and Quebec have substantial external examinations. England/Scotland, Thailand/Malaysia and separate Länder in Germany are other examples.

Differences between countries occur on a range of dimensions. Some countries award certificates before the exit year(s) of secondary education, others do not. Results notices reporting grades or marks may supplement certificates. Assessments may be continuous or end-point; school and external assessments may contribute in different measure to final results; assessments may be set or marked nationally or locally – local assessments and/or marking may be externally mediated. A wide or narrow range of studies may be assessed externally; these may be compulsory or elective and assessed through writing, through performance or product, or orally. Purposes may differ in importance from one system to another. Results may emphasise standards or ranking. Certificate results may be used alone, or augmented by other information for tertiary entrance and selection. National monitoring tests may or may not form a part of the overall report.

Because most developed Western countries have moved away from comprehensive externally assessed or mediated certificates prior to the final or leaving year, aspects of assessment and

¹ For instance Norway, Finland, Denmark and France. Questions are also starting to be raised in the German speaking countries, for example about modular qualifications.

² For example Italy, Spain, Mexico and some Central European countries.

³ The United Kingdom, Australia, New Zealand.

⁴ An OECD project commencing in 2001 will identify the role of national qualification systems in promoting lifelong learning.

certification in the remainder of this paper relate more to certification in the final year of schooling, focussing particularly on the academic awards that ration places at prestigious tertiary institutions. Cases involving other levels are specifically identified.

Level of Certification

Certification in the final school year is almost universal. In some countries, certificates are also awarded at the end of lower secondary school, or at the end of compulsory education as the case may be. A number of others have discarded this practice.

Upper secondary certificates

A majority of countries provide two years of upper secondary schooling after lower or compulsory secondary education. At the final level, a central authority usually administers a certificate. (See Appendix 1 for a comparison of international practices in the late 1990's.) In some cases, systems provide both a certificate acknowledging completion of studies, and a record of results. In some jurisdictions, this certification is associated with student exit levels, more than with one particular year of secondary education. (In Europe, for instance, some countries have vocational strands that certificate at a leaving point one year earlier than the academic strand.) Certification in the penultimate year is rare, though some countries (e.g. Germany, Italy) use results from previous years when awarding the final certificate.

Lower secondary certificates

The practice of externally assessing across the curriculum, and using these results to produce an external certificate, was widespread at the end of lower or compulsory education before the last quarter of the 20th century. It is now rare among developed Western countries: NZ, the Netherlands, the UK and Ireland seem to be the last habitats of this practice.

Nor is it entirely safe there: Ireland proposes a change to its Junior Certificate which presently continues with *"its high stakes ritual and formality"* for a *"purpose that no longer exists in the system"*. (NCCA, 1999). McGaw reports similar lack of purpose after a consultation in NSW⁵ in 1996 *"widespread dissatisfaction with the current School Certificate. The main problem is that Year 10 is no longer an exit point for the majority of students and so those who might seek to use the School Certificate for entry to employment or vocational education and training are the minority who have been least successful. As a consequence there is little respect for the Certificate in the community and it is not taken seriously..."*. In the UK, both Hargreaves⁶, Chief Executive of the QCA, and Dunford⁷, general secretary of the Secondary Heads Association in England, have argued for more weight to be given to teacher assessment, and highlighted the issue raised in the recent Schools Green Paper, of the purpose of the GCSE. Ireland (op.cit.) notes these consequences of modelling the Junior Certificate on its big brother, Leaving Certificate: *"system creaking under the weight of impossible expectations"; "serious problems and disruption for schools"; "development and enhancement [essential to maintain Lower Certificate quality] not possible while the system struggles to support two examinations ..."; "shortage of examiners has now reached crisis point"*.

Many European countries award a certificate to pupils who complete compulsory full-time education or general lower secondary education. In continental Western Europe, systems using external examination results in lower secondary certificates (see Appendix 1) tend to operate lower and upper secondary schools, or change learning pathways substantially at the completion of lower secondary education. Certificates are thus issued at exit from the lower institution, or from the basic education pathway. Generally, these are certificates of satisfactory attendance and completion attested by schools more than certificates of achievement involving widespread external assessment. *In most European countries, most assessment is already done by teachers, rather than external examiners (Times Education Supplement, 29 June 2001).*

In Europe, some jurisdictions use both school assessments, and tests externally approved, examined or mediated to award this lower secondary certificate (Appendix 1). Some countries award it only on the basis of the pupil's marks and the work over the year. Tests that are compiled outside the school are usually administered by the school and may include an oral part. In several countries, the mark given by the teachers is either weighted by an external grade (for example, the results obtained in the

⁵ NSW reduced the number of externally examined SC subjects to four in the mid-1970's.

⁶ Hargreaves D, QCA Annual Conference, June 2001

⁷ Dunford J, *The Times*, June 21 2001

external examination) or decided on the basis of criteria established by an external authority. Ireland and the United Kingdom (and NZ) stand apart by using examiners from outside the school to give the final grade.

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Canada and the larger Australian states⁸ (with the partial exception of NSW – see footnote 5) have largely ceased awarding certificates before the end of upper secondary education. Because this practice has declined, and the certificates themselves are of little consequence, there is little else to be reported from other countries about externally administered certificates at the end of lower/compulsory education.

At this level, the most suitable certification regime for a school system like New Zealand that can be argued on the basis of international practice, is school-based assessment directed towards a completion of compulsory education certificate. Among developed Western countries, wide-ranging external assessment is largely associated with exit level certificates.

Skills assessment

Tests in key skill areas are an increasing trend at or before the end of lower secondary education. NSW has moved to a skills-based focus in the three areas it currently examines for its year 10 certificate. The UK has introduced a Key Skills Certificate. Ontario and Israel are other examples. Generally these are to monitor the system or to support learning rather than to certificate learners. However, they do reassure those who seek external testing for accountability or other reasons.

Among developed Western countries, New Zealand is thus quite typical in its end of final year certification, but unusual in its persistence with wide-ranging external assessment at year 11 and almost alone⁹ in awarding general education certificates at three successive levels.

Entrance/selection

Most countries use leaving certificate results in one way or another for tertiary admission and/or selection. In many cases university admission is *permissible* on achievement of certain grades, but in *practice* significantly higher results are needed because of scarcity of places.

The UK has a Universities and Colleges Admission Service that annually publishes a survey of countries' qualifications used for entry to higher education (77 countries in the 2001 edition). This assists higher education institutions in the UK to evaluate the qualifications of those seeking admission.

Countries vary considerably in the *weight* they place on leaving certificate results for admission or selection; the *methods* they use to augment the certificates; and the *independence* they grant to institutions to decide how admissions and selection will be undertaken. In some countries (e.g. Czecha, Portugal), individual institutions have autonomy on selection processes.

Austria, Czecha, Germany, Netherlands are among countries where achievement of the upper secondary qualification is sufficient (theoretically) to give admission to university. Canada, Ireland, Denmark, Israel are among those who require a minimum grade level in the certificate before entry is permitted. In practice, it is common for higher grades to be required for selection to university places. Jurisdictions where certificate results alone are used for selection to universities and faculties include

⁸ Victoria discontinued its Intermediate Certificate in 1967, while WA issued its last Certificate of Lower Secondary Studies in 1993.

⁹ A-S levels in the UK have introduced examination at three levels, a move that is now receiving increasing criticism of over-assessment.

Australia, Canada, Denmark, Ireland, and (from 2001) Spain. Other jurisdictions place varying weights on certificate results in combination with other selection strategies: e.g. in restricted entry situations, the German Abitur carries a weight of 60%, the Greek Apolytirion 75%, and the Korean secondary transcript 30%.

A number of countries augment certificate results by other evidence. It is common practice for scarce places to be allocated by selection tests¹⁰, which may be conducted by the universities: in some of these the leaving certificate opens the gate to apply for university, with selection depending on test scores conducted for faculty admission. Greece, Israel, Japan, Korea, Spain, Taiwan and the USA are among countries that operate entrance examinations or aptitude tests to determine or contribute to university selection. France has competitive entry examinations to professional faculties after one or two university years. Quebec has a two-year post school diploma that admits to university. Germany takes account of how long the student has waited in ranking applicants for restricted courses; Israel has a psychometric entrance examination which may be augmented by interviews; the Netherlands give automatic entry to high grades, then uses a grade weighted lottery; Queensland operates a core skills test to augment leaving certificate results. NZ makes use of certificate results with little or no augmentation, probably a reflection of the fact that competition for places in NZ is less fierce.

In recognition of the different approaches to leaving certificates in different countries, and different ways of using the results, strategies have been developed to process outside applications for higher education places. For instance, Australia has tertiary admissions processes in place that compare the various inter-state and NZ senior school certificates. Canada must process certificate results that vary widely from one province to another. The Universities and Colleges Admission Service in the UK annually conducts an international survey to update its Entry to Higher Education publication, which gives information on the certificates of 85 countries (including NZ), and their use for admission and selection.

The ways of producing certificate results that countries use for entry and selection are not static (e.g. NSW, WA, Israel). Greece and Spain are decreasing their emphasis on university entrance examinations, while Israel is increasing the weight placed on school assessments. NSW is using school-based assessment to increase the breadth of the outcomes assessed for award of its HSC. Where change is occurring in developed Western countries, it tends to be in the direction of reduced weight on external assessments.

Clearly there is no standard practice in the way certificate results are used for university admission and selection. Being different to others is more the rule than the exception. Strategies have been developed to allow results from different sources to be evaluated for selection purposes. Given these points, NZ should not be concerned about international acceptance of its model.

Curriculum effects

“The impact of assessment on the level and direction of learners’ time and effort must be one of the best established findings of educational research.” Eraut and Cole, *Assessing Competence in the Professions*, University of Sussex, 1993.

The high stakes attached to leaving certificate results by allocation of tertiary places, (especially rationing of faculty places at universities with their pathway to employment prospects and society status), produce a large influence, usually narrowing, on curriculum and learning¹¹. (This is not inevitable – well-designed assessment systems are capable of reinforcing rather than undermining breadth of curriculum and learning – but not many exist.) The narrowing effect is a recurring source of concern to the committees and reviewers given responsibility for evaluating and recommending on learning, assessment and certification policies and practices. Indeed, few reviewers fail to emphasise the significance of this issue (see e.g. National Committee on Testing and Public Policy; Project 2061 (USA); Ontario Royal Commission; Committee of Inquiry into Curriculum, Assessment and

¹⁰ In the USA college admission tests are a major independent industry.

¹¹ Countries opting to manage selection to university places through separate tests may see an advantage in this strategy, in that the tests are sat only by those seeking university admission, and are specifically directed to that purpose. One wonders whether curriculum influences might be lower in this situation.

Qualifications (NZ); Task Group on Assessment and Testing, Dearing (UK); McGaw (NSW); National Committee on Curriculum and Assessment (Eire)¹²;). There is widespread recognition that this narrowing effect needs attention so that senior school learning better matches the needs of individuals, society and the economy.

The curriculum specifies the learning required to fulfil a country's purposes for education. Reviewers in Canada, Australia, Great Britain, and the USA all note the need for assessment to be in harmony with curriculum, through assessment that uses a range of techniques, is school-based as well as external, and is ongoing rather than single and end-point. In this way, assessment can be a positive reinforcement for curriculum, rather than undermining its intentions.

External assessment samples only a portion of the intended curriculum (in some cases quite a small portion) and hence the recurrent concern that student learning is often narrowed as teachers teach to the examinations. This reduces the breadth of curriculum, turns senior schools into agencies of certification rather than education, and may compromise the preparation of students for further education and employment. McGaw (NSW, 1996) echoes the views of many reviewers tasked by their governments to report on national certification systems when he observes, "... anticipation of what the external examinations might do diverts students from the real process of teaching and learning."

Systems with more than one year of external assessment suffer further disadvantage. Not only is the breadth of the curriculum repeatedly compromised, but also valuable learning time is taken up with preparation for examinations, and with the examinations themselves. The investment of valuable learning time in this confined way may influence scores in international tests. It is worth noting that many of NZ's international competitors have discarded large-scale assessments prior to the exit level. Particularly at lower levels, if exams do not tell us what we already know from classroom assessment, then the exams may well be wrong. Reviews, including some conducted in NZ, (e.g. Elley, 1973) persistently cite this point. The designers of the assessment regime for middle levels of the NZ secondary system might ponder this.

Subject coverage

Externally assessed subject coverage varies widely from one jurisdiction to another. Compulsory studies are common, particularly first language studies. Some countries limit the number of external examinations while others provide a wide range. In Canada for instance, Alberta¹³ externally assesses eight subjects, British Columbia twenty-one, and Ontario none. NSW has decreased the number of Y12 subjects on offer, and currently externally examines skills in 3 subject areas at year 10 (=NZ Y11). (Other Australian states have eliminated external assessment before year 12.)

In some countries, part of the external assessment is oral, and a single assessment may cover more than one area of study. Italy, for instance, operates final examinations using two externally set written tests, and a written test and oral examination (including a discussion of the written tests) set by the school and using both school and external jurors. Germany (Abitur) has two written examinations from the main intensive subject stream, plus one written and one oral from the elective stream. The exam results are combined with class work and results from previous years assessments. Israel is currently implementing a reform that will reduce the number of subjects examined externally.

International practice gives no clear message to NZ about the breadth of subjects to be externally examined, as there is no uniformity. However, a number of countries examine only a few areas externally, with the remaining areas assessed within the school.

Outcomes and skills

¹² "Students...have never experienced the Junior Certificate programme as it was intended. ... inadequacy of the range of modes and techniques of assessment has been criticised as undermining the aims and principles of the whole junior curriculum." *Junior Certificate: Issues for Discussion*, Department of Education and Science, Eire, 1999

¹³ Because they use semester and quarter systems, Alberta and BC offer external examinations several times in a year.

Curricula are increasingly being specified in outcomes. It is axiomatic that curriculum expressed in outcomes is assessed and reported against outcomes. Reviews recognise the need to match assessment methods to outcomes assessed, and to assess a full range of outcomes, not just those easily measured. (Here, of course, they are drawing on the most fundamental criterion of assessment quality – validity - and asking assessment systems to practice it, rather than pay lip-service only.)

There is increasing curriculum recognition that an important legacy of education is skills. “So employers are looking for generic ‘human’ skills: communication, co-operation, computation, computer literacy, creativity and critical thinking” (*The Employer*, NZ Employers Federation, October 2000). Because of the well-attested *wytywog* principle (what you test is what you get), it is important that assessment reflect the curriculum emphasis. The UK Key Skills qualification, the Queensland Core Skills test, the NSW external year 10 tests, the Australian key competencies, national monitoring tests in Sweden, the Ontario Royal Commission, national monitoring world-wide, all reflect a move towards assessment of key skills, generally through assessment against defined standards.

Internal / External Mode

“Because it is frequent and varied, classroom assessment can tell far more about what a student knows and has learned than any single test. Using one assessment procedure is like using a hammer to do everything from brain surgery to pile-driving.” Ontario Royal Commission, 1994

“The continued high status of external written assessments inhibits the effective pursuit of skills and competencies not suitable to such assessment.” Broadfoot: BERA Task Group on Assessment, 1994

As indicated above, most jurisdictions long ago moved away from wide-ranging external assessment at the end of lower/compulsory education, and certification at the penultimate level (= NZ form 6) is rare. Consequently, this section focuses on assessment at the leaving certificate level.

NZ stands apart from the majority of developed Western countries in terms of widespread external examination in each of its three senior secondary levels. Among developed Western countries, the only others who show any similarity to this practice are in Great Britain, and the practice, recently introduced there, is currently creating a backlash. In his changed role as school headmaster, Tate, ex-Chief Executive of the QCA, has backed away from the new system he helped to design, saying,¹⁴ “Students are becoming over-examined, they are now examined at the end of three successive years.”

Continuous assessment with no external school-leaving examinations is practiced in Sweden, Queensland, ACT and Ontario. However, it is the exception rather than the rule to have *no* external assessment at the final or leaving level. It is even more rare to have total external assessment. The mix of internal and external is sometimes near the recent NSW change to a 50/50 mix. Another example is Israel, whose current reform will limit the number of final year subjects to nine, of which six will be examined internally.

Reforms

Where change to assessment practices is occurring, the trend is mostly to lower emphasis on external assessment, producing a more even balance between internal and external approaches. Only two developed Western countries (England, NZ) are proposing to increase external assessment.

Reviews of assessment practices in the UK, Ireland, the USA, Canada, Italy, Israel, Australia, and New Zealand all seek to make increased use of school-based assessment. These reviews base their arguments on moves to decentralise; to assess a wider range of abilities; to link assessment more closely with learning; to counter the deficiencies of one-shot, end-point, time-bound assessment; to improve validity by using a broader range of assessment modes to match the outcomes under assessment; to improve fairness. Those jurisdictions externally assessing only a limited part of the curriculum assess remaining areas internally. Recent moves in Israel and Italy illustrate this trend.

Few, if any, reviews argue for a complete move away from external assessment and examinations. Equally, few argue for the retention of existing systems (apart from those that have already broadened their systems (e.g. Ontario, Queensland)).

¹⁴ Tate N, quoted in Sunday Times, 10 June 2001.

The argument is not simply the move to devolve greater educational responsibility to schools. Rather, it recognises that valid assessment can only be delivered by basing much of it in schools. Thus, proposals seek to have a wider and deeper range of skills assessed through a range of techniques. So proposals for teacher development and support are an important part of new directions. This has been recognised in NZ; it will be important to check that the resources and training being provided for introduction of the NCEA are achieving the goal of more valid assessment, and to promote ongoing improvement.

Duplicating the techniques and/or content of external assessments in school exams is not the thrust. McGaw (1997) recommends "...assessment strategies... that ...ensure that school-based assessments do not simply mimic the external examination... and ...obligations on schools to ensure conformity with the breadth requirements for school based assessments...."

It is interesting to note the views of Hargreaves (ibid) regarding teacher capabilities in assessment. He observes that in the late 1980's, only a minority of teachers possessed the high-level assessment skills needed for heavy reliance on teacher assessment. "Today, however, it is very different. The national curriculum and the associated assessment regime together with the GCSE have provided both primary and secondary teachers with a much clearer understanding of the standards involved. From a professional point of view, I would suggest that this could be the most significant consequence of the national curriculum and testing. These have transformed teachers' understanding of what is to be taught and learned and their competence to assess what pupils or students achieve. This is at the heart of how and why there has been a rise in student achievement." Hargreaves (ibid).

Standards and Criteria

"The marks that are given are absolute. This means that the students' level of attainment must not be assessed in relation to each other, but in relation to a number of fixed criteria for what one must achieve to get a given mark." Department of Upper-Secondary Education, Denmark Ministry of Education, 1993

"Because the standards of achievement expected will be clearly articulated and because students' achievements will be reported explicitly against those standards, able students will be encouraged to undertake more challenging study, and they will be rewarded for their achievement". Stanley G, President, NSW Board of Studies, 1998

The move to assess against standards and criteria rather than rank students against one another is widespread. The American Association for Higher Education (1995) defines assessment as "making our expectations explicit and public; setting appropriate criteria and high standards; systematically gathering evidence to determine how well performance matches those standards; and using the resulting information to document performance." The Australasian senior secondary certification authorities have published a formal set of guidelines for the integrity, quality, and long-term credibility of certificates of achievements that states:

"A high-quality certificate of senior secondary education... indicates clearly what a result certifies... and... High-quality curriculum documents... provide explicit criteria and standards for the assessment of achievement"

Commonwealth of Australia and QBSSSS, 1999. A separate paper will outline standards-based approaches in a range of countries. Jurisdictions as diverse as Denmark, the states of Australia, Ontario, Projects 2061 and New Standards in the USA, Scotland, Sweden, Thailand, all assess against standards or criteria.

Rationale

A move to assess against standards and criteria is hardly surprising. The ranking (cohort-referenced) mark-based approach used in the past does not provide the information about student achievement sought by many users. Qualification users who want to know what students can do, find little use for aggregated scores that hide evidence of achievements in areas of interest. They seek information on specific capabilities, which standards-based assessment can supply. "A 1991 survey by the Employers Federation of 400 NZ companies on the usefulness of School Certificate found that the qualification was unable to provide information on whether the student had the generic skills and competences required in the workplace." (The Employer, March 2001)

The policies that support a curriculum based on outcomes also support an assessment system based on outcomes. A jurisdiction that has moved its curriculum towards outcomes will obviously seek to assess student achievement against those outcomes¹⁵. Indeed, if the two are not in harmony in this

¹⁵ The notion of assessing against outcomes has become increasingly attractive in recent years. As the Ontario Royal Commission on Learning put it,

way, then research evidence is adamant that curriculum and learning will be damaged by the dissonance (see footnote 12).

A standards-based model is supported not only by user needs and outcomes-based curricula, but also by accountability arguments. There is widespread international interest in benchmarking educational achievement, and evaluating educational improvement. This can be supported by specification of standards: ranking assessments based on global marks cannot inform judgements about improved performance. However, the rhetoric may be in advance of the practice: in the mid-1990's, the New Standards project in the USA attempted to distil international benchmarks from assessments in a range of countries, but found that they tended to be implicit rather than explicitly defined.

Grading and Certification

Certificate requirements

Practically all countries award leaving certificates in the final secondary year. In many cases a leaving certificate is awarded to those achieving satisfactory completion of a course, irrespective of grade. Grades or marks then supplement the certificate to show the level of achievement attained. In other countries a minimum grade level must be reached before the leaving certificate is awarded, while in some an advanced form of certificate is granted to those achieving defined grade levels. There may be other criteria that have to be met e.g. completion of a certain amount of study at the senior level, compulsory studies, or community involvement.

Grading systems

Grading systems are quite variable. A substantial majority of countries use systems involving 15 or fewer categories of attainment (marks) to grade subject achievement. Nearly half of these use six or fewer categories (grades). Only a small minority of countries use percentage marks¹⁶, and even in these some jurisdictions may have ceased the practice (e.g. Queensland, Ontario). Reliability data make it clear that the accuracy implicit in reporting fine distinctions such as percentage marks is spurious: many decisions made using these fine divisions are unsustainable. Further, the aggregation often used to produce global marks has the effect of hiding important information – a student with a range of strengths and weaknesses may have the same global mark as one who is consistently average – but the former may be much more appropriate for a role that needs particular strengths - or for one that needs to avoid particular weaknesses.

Sweden introduced a new system in 1997 and moved from numeric grades in favour of a criteria-based system using four letter grades. National criteria are set for two of the pass grades. The third (pass with special distinction) has no criteria as it is awarded to those few who produce specially distinguished work for which criteria may be inappropriate. Ontario (4 levels) and NSW (6 bands) use marks as vehicles to interpret performances into criteria-based categories. The International Baccalaureate uses a 7-point criteria-based scale for each subject, aggregating six subjects plus a research essay to produce a final score out of 45, while Israel aggregates points on a 1 – 10 scale over 7 subjects, awarding a certificate to those achieving 42 or more. Germany adopts a six grade scale in its lower secondary system, sub-dividing this into a 15-point scale at the leaving certificate level of the senior secondary Gymnasium.

Some countries are introducing descriptive reporting. The Key Skills Certificate in the UK, and the banded reporting in NSW and proposed in Western Australia are of this type.

Clearly, international recognition of senior secondary certificates is not based on some widely adopted grading convention.

Reviews & change

A number of reviews of education, curriculum and certification have taken place through the late 1980's and 1990's. Such reviews are clearly the platforms on which countries expect to build

(Outcome-based education means that) *schools describe what students are expected to know when they graduate, and then rigorously assess their success in doing so. As one long-time Canadian educator commented, "This seems so eminently sensible that there must be something wrong with it."*

¹⁶ A number of these countries were once British colonies.

acceptance of change in their secondary certification regimes. Many contain significant messages about assessment – not surprising given the profound, intensively researched influence of assessment on teaching and learning.

Reviews are currently proceeding in the Republic of Ireland and Western Australia. New Zealand had its 1986 Committee of Inquiry, followed by the NZQA policy review that led to the NQF, the NZPPTA sponsored *Te Hiro Hou* and the MoE policy reconsideration for school-based achievement in the 1990's. USA initiatives in recent years include the National Committee on Testing and Public Policy, the New Standards Project and Project 2061, together with the many State initiatives that developed through the 1990's, partly in response to the Clinton Goals 2000 strategy. Scotland had the Howie Committee, and is implementing its *Higher Still* initiative, and the rest of the UK had the TGAT review, the Dearing Reports and the recent Schools Green Paper. Ontario, the largest province in Canada, had its Royal Commission, while NSW, South Australia, and Victoria have had reviews that are at various stages of implementation. Italy, Israel, the Netherlands and Spain are making changes to their leaving assessment and certification.

These reviews have little to say on assessment and certification before the leaving certificate year – most end of compulsory (or end of lower school) certification is of low stakes and much is already internal. An exception is the Republic of Ireland, who wish to remove their examinations at the end of compulsory level (=NZSC) because of its restrictive effect on curriculum, and its toll on resources that are needed at the leaving level.

There is widespread evidence in these reviews that the traditional patterns of leaving assessment and certification fall short of the needs of education, of students and of the users of achievement certificates.

It is not proposed to repeat the analysis here, of changes covered in the previous sections. Internationally, many assessment and certification systems are in a state of change, and divergence is the norm, rather than conformity to some widely agreed framework. Australia and Canada, with their wide variation in state and province senior assessment systems and certificates, are microcosmic examples of this. (Though Australian states do have a common theme of assessment against specified standards.)

Conclusion

At first sight, the secondary qualifications scene seems characterised by diversity rather than conformity. Certainly the conclusion from reviewing international experience has to be that no system is so compellingly successful that many others are persuaded to copy it.

However, there is a certain sameness to the issues which many jurisdictions are aiming to address. . Black¹⁷ notes that the issues faced by NZ as it reshapes its certification system “are fundamental and appear in various forms in all countries. There is no country that has solved them successfully.”

Among these common issues are the following. Certificates need to be matched to their purposes. Better alignment of curriculum and assessment is needed to enhance positive and reduce negative learning effects. Status differences between learning in vocational and general areas requires balancing. Spurious accuracy should be avoided in designing reporting systems. Users of certificates should recognise the limited information they deliver. The ranking approaches that fulfilled needs in the mid-1900's do not meet the needs of the 21st century. Standards and criteria are better matched to outcomes, and provide a better basis for assessment than norm-referencing. Assessing the wide range of desired learning outcomes requires substantial use of school-based assessment. Israel's description of its assessment reforms in the UNESCO data bank *World Data on Education* is one of several reviews that illustrate some of these themes: *This reform ... is based on current worldwide trends. It involves moving from centralised regulation to a more autonomous form of assessment. It also involves: moving towards exams that are a more integral part of learning and teaching; moving from assessing basic skills to higher-order skills such as reasoning and exploratory thought; moving from pencil-and-paper assessment towards a wide range of assessment techniques; reducing the proportion of test items that assess limited and restricted knowledge while enlarging the proportion of items stressing contextual understanding; and using criteria rather than norm tests for the matriculation exams.*

¹⁷ Black P, *Report to the QDG of the Ministry of Education, NZ on the proposals for development of the National Certificate of Educational Achievement*

Clearly, New Zealand's NCEA initiative is designed to address a number of the common world-wide issues – incorporating vocational and generic learning, assessing a wide range of curriculum outcomes, using varying assessment methods, incorporating both school-based and external assessment, assessing against standards, reporting in ways that meet user needs in terms of information supplied, and grading on a scale that avoids spurious accuracy. It varies from international practice in containing wide-ranging external assessment at all senior secondary levels and certifying general education at intermediate as well as exit levels, instead of the majority practice of emphasising the exit level. It also fails to match its assessment and reporting to the differing purposes of certificates at different levels.

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Qualifications and Curriculum Authority (UK)

International Bureau of Education, UNESCO

ABBREVIATIONS

ACT	Australian Capital Territory
A-S	Advanced Subsidiary
BC	British Columbia
BERA	British Educational Research Association
GCSE	General Certificate of Secondary Education
HSC	Higher School Certificate
MoE	Ministry of Education
NCCA	National Council for Curriculum and Assessment
NCEA	National Certificate of Educational Achievement
NQF	National Qualifications Framework
NSW	New South Wales
NZPPTA	NZ Post Primary Teachers' Association
OECD	Organisation for Economic Co-operation and Development
QBSSSS	Queensland Board of Senior Secondary School Studies
QCA	Qualifications and Curriculum Authority
TGAT	Task Group on Assessment and Testing
UK	United Kingdom
UNESCO	United Nations Educational, Cultural and Social Organization
USA	United States of America
WA	Western Australia
Y12	Year 12 (Y12 in Australia refers to the same level as Y13 in NZ)

Appendix 1: Secondary Education Certification Practices

Table 1: Certification at the end of general lower secondary or compulsory full-time education

	EUROPE																	AUSTRALIA				CANADA															
	Austria	Baltic States	Belgium	Bulgaria	Czechoslovakia	Denmark	Finland	France	Germany	Greece	Hungary	Iceland	Irish Republic	Italy	Netherlands	Norway	Poland	Portugal	Romania	Scotland	Spain	Sweden	Switzerland	UK	Yugoslavia	New South Wales	Queensland	South Australia	Victoria	Western Australia	Alberta	British Columbia	Ontario	New Zealand	Israel	Singapore	Thailand
Final grade based only on external final exam													*						*																		
Final grade combines internal assessment and an external (or externally mediated) final exam		*				*		*				*		*	*	*			*					*		*									*		*
Final grade based on year's work and an internal final exam																		*					*		*												
Final grade based only on work over the year	*		*	*			*		*	*	*						*				*	*					*										*
No certificate awarded					*																						*	*	*	*	*	*	*	*	*		

Table 2: Certification at the end of general upper secondary education

	EUROPE														AUSTRALIA				CANADA																			
	Austria	Baltic States	Belgium	Bulgaria	Czechoslovakia	Denmark	Finland	France	Germany	Greece	Hungary	Iceland	Irish Republic	Italy	Netherlands	Norway	Poland	Portugal	Romania	Scotland	Spain	Sweden	Switzerland	UK	Yugoslavia	New South Wales	Queensland	South Australia	Victoria	Western Australia	Alberta	British Columbia	Ontario	New Zealand	Int'l Baccalaureate	Israel	Singapore	Thailand
Final grade based only on external final exam								*					*						*																			
Final grade combines internal assessment and an external (or externally mediated) final exam	*	*		*		*	*		*		*			*	*	*		*		*				*		*		*	*	*	*	*		*	*	*	*	*
Final grade based on year's work and an internal final exam					*					*		*				*							*		*												*	
Final grade based only on work over the year			*																		*	*					*						*					

Additional notes

Italy: In 1998/1999, a new final upper secondary education examination came into force. It includes three written tests and one oral test. An external body sets the first two written tests; the third written test and the oral test are set by the school. The student's teachers and an external examination board award the final grade.

New Zealand: Unlike most countries, New Zealand also awards a certificate in the year intermediate between the end of compulsory education and the end of secondary education.

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