Grading: A Review of National and International Issues

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1   Introduction

This report was commissioned to review national and international issues around grading, taking into consideration the impact grading can have on individuals, educational institutions and education systems as a whole.

Concerns about grading are similar to those raised about assessment generally: validity, reliability, application, authenticity, fairness, predictive capacity and appropriateness to age, subject and skills. Of particular concern is the allocation of a linear number or letter to describe a pupil or student's non-linear ability, skill or knowledge. When grading is elevated to the point where it can determine the future of an individual, an educational institution or an educational system, the stakes are even higher. For individuals, grades are used as a means of selection within and between institutions, as a signal of ability to prospective employers. At institutional level, they are used to compare schools, colleges and universities in league tables. Internationally, they are one indicator of the performance of whole systems.

In this overview of the topic, we begin using a number of existing sources to explore purposes of grading, grading criteria and strategies, and issues of validity and reliability. We then proceed in section three to some cases which illustrate issues that pertain to grading, drawing upon material from the UK, other parts of Europe and beyond.

In section four we describe the systems of three countries (Denmark, Finland and Australia), drawing out issues that are pertinent for comparison.

2   General background

Purposes of grading

There are a number of sources that detail the purposes of grading. One of the most comprehensive is on the website of Flinders University (2007) in Australia. This section on purposes of grading — and the following sections on effectiveness of assessment, grading criteria, validity and reliability in judging and grading, and grading strategies — are drawn from that source.

Grading is an interpretation of the products of learning to reflect where pupils and students stand in relation to an orderly development of competence. Grades show both student and teacher not only where the student currently is, but what needs to be done to improve that position. It must be possible to combine grades in order to meet administrative requirements for awarding levels of achievement.

Grading has several general purposes:

♦   It can be used to analyse achievement (product or performance) with the aim of identifying omissions and correcting faults and for reinforcing and confirming achievements.
♦   It can be used in measuring a product or performance against an independent and objective standard of excellence, to which nothing is added to education by adding a grade. The true rationale of the evaluation is not educational but professional in that it indicates whether a person is qualified.

Grading facilitates the relative comparison of the performances of a number of students. This is the grading activity that produces the greatest anxiety and provokes the most opposition, and is neither educational nor professional but economic.

The most common methods of carrying out grading are either through a neutral external examiner, usually working to the pre-set grading of an examinations board or authority, or through a teacher's judgement of achievement, although this too can be subject to both external expectations and those of the educational institution or department. Increasingly, student self-assessment and peer-assessment is also utilised. Expert professionals and community representatives can also carry out grading according to professional or community standards. Finally, computer-aided assessment and grading can be used with any of these arrangements. Apart from self-assessment and peer-assessment, the expectation is that the grading will be carried out by experts.

Effectiveness of assessment

Assessors and assessing authorities

For grading to be effective, assessors and assessing authorities are required to have certain key attributes. First of these is a detailed knowledge of their discipline or subject area, of curriculum intentions, and of learners. They are also expected to have a detailed knowledge of assessment options and the knowledge of the limitations of these options. They need to be clear in their understanding of the purposes of assessment, and have a repertoire of meaningful approaches that have been intentionally developed for interpreting students'

learning performances. Finally, an awareness of contextual influences on their practice, and of the limitations of their own interpretations and judgements, is required.

Grading criteria

The grading process has to adhere to criteria of comparison to be meaningful to the students, teachers and employers. The meaning of grades is embodied in both the criteria and the points of reference. These are selected based on the purpose of a particular assessment. The points of reference can be reduced to three types:

♦ Pre-established criteria, in which the assessor asks: 'Did the student performance or learning product demonstrate or address the criteria for which the task was established?'
♦ Pre-determined behavioural norms, in which the assessor asks: 'How does the student performance or learning product compare against established norms for this particular level of students?'
♦ Ideographic, in which the assessor asks: 'How does the performance or product measure against this student's earlier performances or products?'

Performance assessments require further criteria. These include transferability of the skills and knowledge required to novel conditions; fairness for all students; a degree of cognitive complexity of the processes the student must use to complete the performance; meaningfulness of the problems; quality of the content and comprehensiveness of the coverage.

Construction of grading schemes

In the construction of grading schemes, there are two main questions to ask of a student's work: 'What kind of level is exemplified?' and 'How well is it exemplified?'

Biggs (1992) addressed both issues of grading in the *Qualitative Taxonomy for Grading Students' Performance*:

Level	Grade	Description
Pre-structural	(F)	Irrelevant or incorrect learning
Uni-structural	(D)	Understanding of a few basic ideas (retelling)
Multi-structural	(C)	Understanding and coverage of a number of aspects of the topic but little integration or transformation (encyclopaedic)
Relational	(B)	Ideas cohere Using selectivity and judgement Using the appropriate language of the discipline and can use in novel contexts
Extended Abstract	(A)	High level of abstract thinking Original Ideas generalised and applied to new contexts Ideas drawn to conclusions Highly reflective Sharply perceived Generalised from personal experience

Table 1: Construction of grading schemes (Biggs, 1992)

Validity and reliability in judging and grading

Research tells us that there are a number of factors which influence the grade assigned. These are:

♦ Graphic quality of the students' texts

   Surface features such as handwriting or word-processing and layout can contribute positively or negatively to the visual appeal of a text.

♦ Readability of the text

   Features such as sentence structure and spelling can hinder or enhance the reading and detract from or enhance the quality of the ideas in the text.

♦ Use of text structural conventions

   When certain components are expected, their presence or absence can impact on how the text is received, eg essays should have an introduction, a body and a conclusion; good introductory paragraphs have been found to have a significant effect on grading.

♦ Cues in students' text

   Certain features of the students' work may distract the assessor from how the work addresses the assessment criteria, eg an oral presentation that might appear polished and well-researched but does not address the content criteria could be graded higher than one that addresses the content criteria but is less well-presented.

♦ Teachers' prior knowledge and expectation of students

   Prior judgements can frame the way assessment products and performances are interpreted, and assessments may tend towards the 'assumed' or usual level for that student.

♦ Teachers' personalities

   The desire to be perceived as 'tough', to have a reputation for being vigorous, or to be liked, can influence the approach to grading.

♦ Teachers' beliefs about grading and education

♦ Teachers' experience in grading

   More experienced assessors look for evidence of learning by assessing for meaning, the less experienced tend to note what facts are contained in the assignment without assessing the overall meaning and coherence.

♦ Quality of the other papers previously received

   The quality of the five preceding papers has been found to have a significant impact on the grade assigned to the subsequent paper.

Bachor, Anderson, Walsh and Muir (1994) suggest that rather than a concern for validity and consistency on a single test at one moment in time, the concern should be for:

♦ Representativeness which questions the meaningfulness in the information the student is required to generate and the extent to which the task reveals the student's cognitive activities.
♦ Accuracy which is a concern for mapping a student's typical performance related to clearly outlined criteria.
♦ Consistency which is a concern to use consistent established criteria but in tasks that best suit individual students. Not all students can demonstrate their learning in the same manner.

Grading strategies

To achieve a high degree of reliability, there are a number of grading strategies which can be adopted. Multiple marking of the same paper by either the same assessor or by two different assessors; blind marking (not knowing who the students are); establishing standards through the use of model essays; marking all responses to the same question together in the case of essay tests that contain several short essay questions; employing 'neutral' external examiners; using computers in grading; employing assessor self-monitoring; finally, randomising the order of papers prior to marking rather than sorting beforehand. Sorting essays into perceived grade categories prior to assigning grades exacerbates the tendency for contrast effects.

Training in grading

Some of the literature on the problems associated with teachers at all levels and grading seem to point to a lack of training and opportunity to gain experience and learn from colleagues. Allen (2005) suggests that teachers find it hard to change the invalid 'grading' schema that has become embedded in their minds from their own experience as students and that 'inadequate education in valid assessment and grading principles and practices is a reason many teachers continue to perpetuate invalid grading practices with students'.

Tomlinson (2005) noted that teachers often perceive an inherent conflict between 'differentiated instruction', which emphasises attention to variance in students' readiness levels, interests, and learning profiles, and 'the grading system', which seems to indicate a sort of rigidity and standardisation. She examined key principles of quality differentiation and of quality grading to determine whether the two facets of educational practice are compatible and concluded that the perceived incompatibility stems from misunderstanding the essential principles of differentiation and grading, and from entrenched classroom habits that often run counter to guidance from experts in grading and in differentiation.

Both Allen's (2005) and Tomlinson's (2005) findings highlight the need for adequate training for teachers to ensure they have adequate opportunity to understand and apply new grading systems. This is distinct from objections professionals raise about specific grading and assessment schemes borne out both by teacher practice and research.

The need for training is evidenced in all sectors. Criteria-based approaches to assessment and grading in higher education is increasingly used in preference to norm-referenced grading as a consequence of its sound theoretical rationale and its educational effectiveness (Sadler, 2005). However, when Sadler reviewed the most common grading policies that purport to be criteria-based, he concluded from his analysis that there is no common understanding of what criteria-based means or what it implies for practice and suggests that

this has inhibited high-quality discourse, research and development among scholars and practitioners. Additionally, he found that 'the concepts of "criteria" and "standards" are often confused and, despite the use of criteria, the fundamental judgements teachers make about the quality of student work remain subjective and substantially hidden from the students' view. As they stand, none of the approaches identified in the survey is fully capable of delivering on the aspirations of criteria-based grading'. He proposes instead, the shifting of the primary focus to standards and making criteria secondary.

The use of self-grading and peer-grading

As in the UK, in the US, Guskey (2007) observed that most modern education reforms include the use of large-scale assessments and that policy makers and legislators at the national and state levels are attracted to large-scale assessments as instruments for reform because they can be relatively inexpensive, relatively quick to implement, externally mandated, and the results are highly visible (Linn, 2000). In a study which compared different stakeholders' perceived validity of various indicators of student learning used to judge the quality of students' academic performance, Guskey found that while educators generally hold similar perceptions, significant differences exist between school administrators and teachers. Administrators perceived the results from nationally normed standardised assessments, state assessments, and district assessments to be more valid indicators of student achievement than did teachers. In contrast, teachers granted more validity to classroom observations and homework completion and quality than did administrators.

Sadler and Good (2006) compared teacher-assigned grades to those awarded either by students to themselves or by their peers. By training students to grade with the help of a scoring rubric, a very high correlation was obtained between students and their teacher on test questions (r = 0.91 to 0.94). They found patterns of bias when students assigned grades. When grading others, students awarded lower grades to the best performing students than their teacher did. When grading themselves, lower performing students tended to inflate their own low scores. Performance on an unannounced, second administration of the same test one week later measured the degree to which student-grading resulted in any increased understanding. Students who graded their peers' tests did not gain significantly more than a control group of students who did not correct any papers but simply took the same test again. Those students who corrected their own tests improved dramatically. The authors conclude that self-grading and peer-grading appear to be reasonable aids to saving teachers' time, but whereas self-grading appears to result in increased student learning, peer-grading does not.

Classification systems in higher education

This is a large and complex field within education and there are a number of still unresolved controversies. Some of these are addressed in case studies in section three, whilst others are better understood within the context of the selected countries' education systems and will be found in section four. Case studies are presented on grading which relate to firstly, the extent to which grades awarded at school level qualifications can act as predictors of performance in higher education (*Grading, Selection and Equity — a Case study of Medicine*). Additional information about students in the form of portfolios or progress files is one way which could help, and the case study on the US system and the use of the Grade Point Average and associated transcript is provided here by way of illustration (*Comparability of Courses and Qualifications — the Grade Point Average (GPA) and*

Scholastic Ability Tests (SATs)). Secondly, *The Robustness of Classification Systems —
Higher Education Grading in the UK*, discusses the purported inadequacy of the current
classification systems for employers as a predictor of quality. Also discussed in section three
is the European Credit Transfer and Accumulation System (ECTS), introduced to facilitate
student mobility (*Higher Education International Grading Systems — Student Mobility and
Employability*). Whilst ECTS concerns itself with comparators across countries, there is still
considerable variation within countries between different higher education grading schemes.
In Denmark the issues of classification are reverberating through the whole higher education
sector to the point of leading to restructuring at a national level (section four).

3   Grading issues — some cases

The following cases illustrate some generic issues related to grading in practice, drawing upon material that crosses a range of domains. For issues on grading that are country-specific but which nevertheless serve to highlight or suggest different approaches, see sections four. Under Denmark, see *Changes to Danish school culture*; Finland, see *Schooling and grading*; Australia, see *Australia-wide grading and assessment concerns, Year 12 curriculum content and achievement standards, Vocational education and training in schools, Competency-based assessment grading and Higher Education assessment issues*.

The first illustration from the schools sector in England relates to reliability of testing, and concomitant grades, when used for predictive purposes. Attempts to refine grades by being more precise appear to lead to even less accuracy, according to some commentators.

The second illustration considers grading as it relates to formative and summative assessment. Demand for 'objective' grading is often an external constraint influenced by the need for systems to be accountable to governments and for governments themselves to be able to compare performance within an international arena. This tends to put greater weight upon summative grades and less upon formative approaches. In this section, drawing upon Harlen's reviews of international literature, we summarise arguments for marrying formative, AiFL-type (Assessment is for Learning) approaches to demands for summative assessment for the purposes of accountability and competition.

The third illustration concerns the adequacy of grading systems used for selection to higher education, especially in high demand subjects such as Medicine. Adequacy in this context includes the capacity of the grading systems of traditional school-leaving assessments to predict subsequent academic performance and suitability for particular professional roles. Additionally, grades at school level are reflections to at least a certain extent of school attended and social class, and may not completely reflect the range of ability of all in the population. The use of additional instruments such as psychometric testing attempts to add more armoury to mechanisms of selection.

The fourth illustration relates to classification systems based upon the accumulation of grades and draws upon literature pertaining to higher education in the UK. Classification of undergraduate degrees in particular is an important signalling device within the labour market, and historically has been used as a predictor of quality by employers. However, an overview of the literature would suggest that current classification systems are inadequate.

Such concerns have led to consideration of additional evidence in the form of portfolios or progress files describing in much more detail what students have achieved rather than relying on grades alone. However, one element still would relate to grades, but would provide finer detail of what has been achieved. The fifth illustration therefore shows the typical way in which grades are utilised and reported in the US system and the use of the Grade Point Average and associated transcript. Even though such details are helpful, GPAs are said to be subject to internal inflation through over-generous internal assessment by teachers. These limitations have led to the use of Scholastic Ability Tests (SATs) as objective measures of ability.

Finally in our sixth illustration, we describe the European Credit Transfer and Accumulation System (ECTS), grading within this system, and its implications for student mobility. Grading is no longer simply a national matter, and its reliability may assume increasing importance if the precepts intrinsic to the Bologna Agreement become a reality.

National assessment systems — the case of schools and Standard Assessment Tests (SATs) in England

The use of grading for comparative purposes has been well established in England, though not without on-going opposition, since the introduction of National Assessment in the 1980s. Attempts to introduce the same in Scotland and Wales have so far been successfully resisted. In England, the reliability of the tests has been subjected to ongoing criticism. In part to meet this, 'personalised learning' together with the value of national assessment data in achieving it have been identified by the UK Government as essential for raising educational standards (Miliband, 2004). The national assessment data have a number of purposes. These include the assessment and prediction of the progress of individual children as well as the monitoring of standards at school, local and national level. Doyle and Godfrey (2005) question the reliability of national assessment data in respect of the performance of individual children, their predictive validity, and thus their value in contributing to the provision of 'personalised learning'. Wiliam (2000a, b; 2001a, b, c) has also challenged the dominant role of the Key Stage test results on a number of grounds. His findings indicate that standardised test data, which may be reliable for assessing average abilities for groups of children (for example, sets, classes, schools, cohorts), have questionable reliability for assessing the attainment of individual children and for tracking their progress.

Another issue of concern in respect of the SATs has been the problems with the levels assigned to pupils. Where they are very general, as in A, B, C, D or 1, 2, 3, 4 as children move from year to year, then it may appear that little or no progress has been made. Wiliam (2001a) dismisses the possible and seemingly simple solution to this — to divide each of the levels up — A1, A2, A3, A4 etc — as serving only to compound the unreliability of the levels because it is at the split-off points that the test levels are at their most unreliable:

> 'Regarding the use of levels, rather than scores, for the Key Stage test results, the more precision that is exercised in this process, the lower the accuracy is likely to be because at each 'between level' there is room for error and because in any event, the unreliability of the test may have produced an inaccurate 'observed score' as opposed to the unobservable 'true score.'

The compatibility of grading within formative and summative schemes

Hayward and Hutchinson (2005) explain how, compared to England, in Scotland the drive to use assessment and grading for accountability purposes did not initially have as strong an impact. The 5–14 Curriculum, introduced in the early 1990s, had what is now called 'assessment for learning' as an integral part of its guidelines with the work of Paul Black and Dylan Wiliam (1998) a major assessment influence on the programme design. But soon the growing emphasis on accountability created a demand for 'hard', reliable data for analysis. Although for teachers this meant a considerable emphasis on record-keeping, tests were seen to provide the data required quickly and easily. Hayward and Hutchinson (2005) suggest other reasons why the 5–14 assessment guidelines failed to take hold, in particular the assumption built in to the dissemination model that the research-based *Assessment 5–14* (SOED, 1991) policy was robust and had only to be put into practice by the teachers and the schools, who had expressed their support of its principles. In any event, a National 5–14 Survey of Attainment was introduced in 1998, raising the stakes for testing. Reporting on the 5–14 levels attained by pupils at local authority aggregate level was also introduced, but not at school level, so that there were no published school-by-school performance tables.

Latterly, with assessment for accountability increasingly discredited, AiFL would appear to have a better chance this time round, particularly as research evidence on managing change is being applied (eg from Fullan, 2003), with a strong emphasis on collaborative approaches with teachers a major priority. However, accountability has not gone away nor is likely to, particularly with international pressures such as the high prestige OECD PISA tables looming every three years.

The challenge seems to be to identify ways in which the strong research findings on formative, AiFL-type approaches can be married with the demand for summative assessment for the purposes of accountability and competition. Harlen (2005), in a finely researched paper, takes up this challenge. Her findings from literature reviews and from case studies in Sweden and Queensland as well as the UK, suggest that the key is to maintain the distinction between formative and summative *purposes* of assessment while seeking synergy in relation to the *processes* of assessment. In other words, just as 'formative assessment is for learning' so can summative assessment also. She writes, 'In order for assessment to have a formative purpose it is necessary to be able to report not only the students' final performance, but also what processes students need to improve in order to raise their performance'. Acknowledging the complexities and time-consuming nature of this approach, she argues that the use of computers both by staff for recording purposes and by students for self-assessment purposes, is perfectly feasible. In both cases, grading can aid and be part of learning and record progress. 'In this way,' Harlen writes, 'the process of assessment itself begins to impact on performance; teaching and assessment begin to coalesce. Factors identified as values of using computers for learning then become equally factors of value for assessment. These include: speed of processing, which supports speed of learning; elements of motivation such as confidence, autonomy, self-regulation and enthusiasm, which support concentration and effort; ease of making revisions and improved presentation, which support quality of writing and other products; and information handling and organization, which support understanding' (NCET, 1994).

Crucially, Harlen emphasises, the procedures that will most help both the effectiveness of formative assessment and the reliability of summative assessment are those that involve teachers in planning assessment and developing criteria: 'Through this involvement they develop ownership of the procedures and criteria and understand the process of assessment, including such matters as what makes an adequate sample of behaviour, as well as the goals and processes of learning. This leads to the position that synergy between formative and summative assessment requires that systems should be designed with these two purposes in mind and should include arrangements for using evidence for both purposes'.

The criteria or detailed indicators can then be mapped onto the broader criteria, (Harlen 2005). The mapping will smooth out any misplacement of the detailed indicators. But Harlen makes clear that the mapping is not a summation of judgements about each indicator. Rather, the evidence of learning is re-evaluated against the broader reporting criteria. It is the same evidence, used for different purposes.

Grading, selection and equity — a case study of Medicine

A major issue in the field of grading is the capacity of grades achieved within school-level qualifications to act as a predictor of performance in higher education. This is particularly acute in HE disciplines such as Medicine where there is a high demand for places, and where institutions can be highly selective in admission. The matter becomes even more important when questions of equity also feature in debate. Admission to subjects such as Medicine in the UK is skewed heavily towards higher social economic groups, and although in part this is a function of differentially high application rates by these groups (see Thomas et al 2005), there clearly are issues of equity in selection to be addressed (see McGavock and Osborne 2004).

For this reason and others, there is a question mark over whether Highers and GCE A-levels should be the only indicator, or even treated as the best discriminator, of aptitude for applicants to Medicine or other health-care professions. This connects with wider concerns regarding the decline of standards and grade inflation. McManus has conducted a 20-year prospective study on A-Levels and intelligence as predictors of medical careers in UK doctors. His study reveals that 'it is not clear yet whether the predictive value of 'A' Levels results from assessing knowledge, motivation or study habits; other measures such as personality are also probably important in predicting outcome doctors' (McManus et al, 2003). Some studies suggest that GCSE grades rather than A-level grades better predict success in clinical careers (James and Chilvers, 2001; Garlick, 2004). There is a search for effective indicators of potential to make access to Medicine fairer. The British Medical Association (BMA) recently raised the question of which are the most effective instruments for selecting medical students (BMA, 2004a, p 78).

Instruments akin to the US Scholastic Ability Tests (SATs) described later, including psychometric tests such as the Personal Quality Assessment (PQA), and the Bio Medical Admissions Test (BMAT) (used by amongst others Oxford, Cambridge and University College London) have been developed to aid selection of candidates with predicted 'A' grades at GCE A-level. One of the main reasons for using the tests is to measure aptitudes that cannot be coached and so assess ability in a way that is independent of social class. Psychometric tests are still being piloted, but are being increasingly used in selection procedures, and as of 2006 the UK Clinical Aptitude Test (UKCAT) has been used as part of the selection process to medical schools in the UK, including all Scottish universities, as a measure of aptitude. It will be necessary to follow cohorts through training and several years of practice to confirm the predictive value of these tests.

Musselbrook and Dean (2003, pp 26–7) indicate that, despite a wealth of course information being available, students often choose the 'wrong course'. 'A poor match between students' expectations of a course and the reality is often the most common reason for withdrawal' (see also Simpson, 2004). This may endorse, therefore, the use of an additional tool, such as psychometric tests to identify suitability for courses. Since suitability for courses is an important factor in students continuing with their chosen courses, the use of this kind of tool has potentially significant implications for recruitment and retention.

The robustness of classification systems — higher education grading in the UK

In relation to higher education in the UK, grading at honours degree level is by way of a classification system first introduced in 1918 (Alderman, 2003). In recent years, given the expansion of student numbers, and a seeming trend of inflation in the numbers receiving 'good'[1] degrees, calls have been made for the present system to be replaced or at least overhauled (Alderman, 2003; Bawden, 2004; UUK, 2004, 2005, 2006).

At present, honours degrees are generally classified as:

♦ I — signifying a 'first class' degree
♦ II:i — signifying an 'upper second class' degree
♦ II:ii — signifying a 'lower second class' degree
♦ III — signifying a 'third class' degree

Of particular importance is the scoping study known as the 'Burgess Report' (UUK, 2004). This led to two further consultations asking for contributions from interested parties to the issue of recording and measuring student achievement (UUK, 2005, 2006).

In the report, the following three key conclusions were reached:

'Whilst the UK honours degree is a robust qualification which continues to serve us well, the existing honours degree classification system has outlived its usefulness and is no longer fit for purpose. There should be further investigation of alternative classificatory systems for representing achievement which better meet the needs of different audiences and a set of criteria need to be identified and agreed for the purpose of evaluating such a system. There is merit in incorporating some of the existing initiatives in this area including the Higher Education Transcript, the Progress File and Personal Development Planning. Account must also be taken of developments elsewhere in the UK, in other sectors and European developments such as the Diploma Supplement and the Europass.

The sector should actively investigate the feasibility of designing models for predicting value added for potential students. Existing databases could be used to this end but any proposals will need to be carefully trialled and piloted with students and institutions to determine their robustness and usefulness.

Whilst acknowledging the autonomy of higher education institutions, the sector should work towards a common further and higher education credit system for England, Wales and Northern Ireland, articulating effectively with the Scottish Credit and Qualifications Framework and the European Credit Transfer and Accumulation System (ECTS) in Europe. To bring this to fruition, terminology will have to be agreed and defined.' (UUK, 2004: pp. 4–5)

In addition, 14 recommendations were proposed. Of these, three (Recommendations 1, 3 and 4) were directly related to the issue of the degree classification system currently in operation.

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[1] A 'good' degree is normally equated with a classification of a 'first' or 'upper-second'.

The main thrust of the three recommendations was as follows:

> '…a need for further investigation of classificatory systems for the appropriate and effective representation and communication of learning and achievement…
>
> since the current system of degree classification no longer provides a sufficient means of summarising student achievement, it should be reviewed…
>
> proposals for changing the degree classification system should not merely focus on the undergraduate degree but should take into account the complete range of higher education qualifications.' (UUK, 2004: p. 5)

As noted above, concerns were already being raised in the popular press. In the case of Alderman (2003), he was concerned with a classification system that seemed suited to an era when written examinations held greater sway than is the case today.

> 'The historic emphasis in British universities on performance in a set of written examinations has generally meant that firsts are awarded to those who perform best (whatever that means) under exam conditions. The problem is, life is not lived under exam conditions. And over the past decade there has been a welcome diversification of assessment methods, placing much greater emphasis on project work and even on oral skills, assessed over a period of time.'

In addition, he continued, the present system provides little to employers in order for them to gauge the best candidates in terms of employability.

> 'Few employers in my experience have any real idea what differentiates an upper second from a lower second. The Quality Assurance Agency now asks us to produce "programme specification templates", but nobody other than programme validation panels and QAA inspectors ever bothers to read them. And if they did, they would not gain a great deal of information about the totality of academic, let alone personal, strengths and attributes of any one particular student.
>
> At bottom, a degree classification can only be described as the crudest of summaries, concealing a great deal more than it appears to reveal. A student may have exited with a lower second, but may have excelled in those subjects relevant to a subsequent employment. A degree classification diploma will just not show this.' (Alderman, 2003)

However, in reporting the launch of the UUK Scoping Report (UUK, 2004) Bawden (2004) suggested that while Universities UK (UUK) was concerned that a new system would soon be in place, whether individual universities would wish to implement it was another matter. Bawden also suggested that the main employers' body, the Confederation of British Industry (CBI) was not as concerned as Alderman (2003) suggested above.

> 'A spokesperson for Universities UK said that by December 2005 clear progress should have been made in deciding what kind of classification system should replace the existing honours degree system. But ultimately, it will be up to individual universities to implement the proposals, she added.
>
> Whether older institutions will wish to give up the honours system of degrees remains to be seen. In any case, employers do not perceive there to be much of a problem with the current format. "It is not a significant concern for our members," a spokesperson for the Confederation of British Industry said.' (Bawden, 2004)

Since the mid-90s there have been a number of academic research studies which sought to examine the role of the degree classification system in operation in the UK. Parlour (1996), examined variation across departments within the same institutions, and suggested that analysis revealed a degree of heterogeneity that made it difficult to identify classification procedures that could accurately indicate student quality. Indeed he went further:

> '…the degree classification procedures followed by most British institutions of higher education fail to conform to the basic principles of comparative justice, waste valuable resources and serve no useful purpose.' (Parlour, 1996: p. 25)

In comparison, work by Yorke (2002) sought to determine trends in the percentage of 'good' degrees awarded by institutions in England, Wales and Northern Ireland through an examination of the variation in degree classification across subject areas for the period 1994–95 to 1998–99. He concluded that:

> 'Although earlier research had shown a rise in the modal class of honours degree over the period 1973 to 1993, the present analysis demonstrates that, although there is an overall upward trend in the percentage of good degrees, the direction of the trend has varied from subject area to subject area.' (Yorke, 2002: p. 92)

The work of Curran and Volpe (2004) drew on and expanded upon the work of both Parlour (1996) and Yorke (2002). Curran and Volpe sought to examine how variations in institutional classification regulations could impact on the level of individual performance required to: obtain a 'good' degree at different institutions.

Drawing on the economic theory of 'signalling', Curran and Volpe sought to examine the robustness of a classification system that acted as a 'screening' device for allocating individuals to the labour market.

In the economics of education, according to signalling theory, 'the choice to invest in education is determined by the agent's intention to signal her "quality" to future employers and, therefore, to enhance her employment opportunities'. (Ibid.: p3) However, the theory works on the assumption that education is a good 'signal' of the quality of the future employee to allow employers to discriminate between applicants. 'Consequently, if the "signal" is somehow distorted transaction costs in the labour market emerge, resources are misallocated and productivity is reduced.' (op. cit.: p. 4)

However, as they suggest, if the signal is distorted then it acts as an imperfect screening method to employers.

> 'A degree classification that does not truly reflect the student's educational achievement creates distortions in the labour market and affects the relative employability of students. The evidence shows a high degree of heterogeneity concerning the degree classification regulations adopted by British universities. The implication of this heterogeneity implies that students with similar profiles are awarded different degree classes not only across different universities but, in some cases, also within the same institution.' (op. cit.: p. 4)

One reason why Yorke did not include Scottish universities in his analysis is due to the different structures of the degree system in operation in Scotland. Honours degrees in Scotland traditionally take four years to complete, with the possibility of exiting at the end of third year with an Ordinary (unclassified) degree. Another possible reason is contained in the submission from the Royal Society of Edinburgh to the first consultation (UUK, 2005) that resulted from the Burgess Report.

'There are weaknesses in the existing UK system, which it can be argued no longer provides sufficient distinction between candidates of different calibre and causes considerable problems in the stepped level of assessment where career prospects and future prestige hang on decisions at the margin. Employers are also increasingly, devising their own systems and criteria, for example by using only "approved lists" of institutions and by setting their own tests.

However, Scottish honours degrees are not merely classified degrees but are specialised degrees involving a progression of study towards more advanced study. Entry to honours level degrees is commonly selective which must affect the distribution of the various possible classes.

At face value, a more detailed profile of a student's achievements and abilities might well be more meaningful, if such a profile could be accurately, consistently and efficiently obtained. Nevertheless, there will be little sympathy for a system that looked complex and unreliable and involved significant, new commitments of staff time. The information regarding the outcomes of learning will also need to fully meet, not only the students needs but also the interests of employers and the wider public.' (RSE, 2005)

In the short review above, concerns have been raised about the robustness of the present UK degree classification system. As also noted, these concerns have been present for a number of years. Indeed concerns may be growing. In an update on his earlier pronouncements, Alderman (2007) suggests:

'It is apparently now possible for Liverpool students to be awarded first-class honours without having actually achieved a first-class mark in any individual component of their degrees.'

However, the fact that despite hoping to have an alternative in place shortly after review (see the quote from Bowden above), consensus over the replacement has not been reached as evinced by the two follow-up consultations to the original Burgess Report (UUK 2005, 2006).

Alternative schemes have been suggested. These involve the use of what has been termed a progress file. The following quote outlines the QAA's advice for students regarding the contents of the proposed progress file.

'The term progress file includes three elements:

A transcript

This is a record of your learning and achievement. It includes details of the modules or units you have taken throughout your course. Its format will be determined by your institution — contact your student union or course leader to see what your institution is doing.

Personal and Development Planning (PDP)

This is a structured and supported process, which will help you think about your own learning and achievement and plan for your education and career development.

Personal Development Records

Progress reviews and plans are used to help clarify your goals and can provide a resource from which material is selected to produce personal statements (eg CVs) for employers and others. They include written records of your PDP.' (QAA, n.d.)

The use of a portfolio of evidence is also proposed by Harlen in the context of school assessment and allows the combining of summative and formative grades (Maxwell, 2004, pp. 2–3). As the student builds up the portfolio of evidence of their performance, earlier assessment may be superseded by later assessment covering the same underlying dimensions of learning. The aim is to report ''where the student got to' in their learning journey, not where they started or where they were on the average across the whole course.

Comparability of courses and qualifications — the Grade Point Average (GPA) and Scholastic Ability Tests (SATs)

Whether it be for reasons of inter-institutional progression or to signal ability to employers, the necessity of finer ways to distinguish potential appears to be clear. Another approach to classification is the use of Grade Point Averages (GPAs). Whilst this at one level is no more instructive than a degree classification, the tendency to associate the Grade Point Average with a transcript that gives details of component scores is helpful. Furthermore, GPAs are not simply cumulative at the level of a whole award, but are also detailed for subjects within an award, and transcripts show performance within components. Nonetheless, in the US system this level of detail is not sufficient and there are concerns about reliability. GPA is usually supplemented by the Scholastic Ability Test (SAT).

In the US, the GPA is a fundamental measure of student performance across the whole system, and is summarised by College Pond (2006). It is an indicator of the student's performance, consistency and motivation levels over the years. It is an averaging of the overall grades earned and is a simple point system, where the student's scores in each class are added; and the addition then divided by the total number of classes taken.

The point system can be roughly calculated as:

♦ A grade — 90% or better — 4 points
♦ B grade — 80% to 89% score — 3 points
♦ C grade — 70% to79% score — 2 points
♦ D grade — 60% to 69% — 1 point
♦ F grade — 59% or lower score — 0 points

So, to determine a GPA out of this measure, a student has to take the score achieved in each class and add them up, then divide the total by the number of classes taken.

For example, if from four courses an A, two Bs and a C are achieved, the following applies: A = 4 points, two Bs = 6 points, C = 2 points and the total of 12 points divided by 4 equals a GPA of 3.0.

A sense of the comparability of GPAs internationally can be gained by considering how students from incoming countries are treated in processes of selection. Students from countries who do not use the GPA system and who apply to US institutions must convert their scores and grades into the GPA measure when applying. Thus, a student among the top 5% of his or her class would have an approximate GPA of 3.85 to 4.0. Similarly:

Percentile	Approx GPA
6% to 15%	3.7 to 3.84
16% to 25%	3.55 to 3.69
26% to 35%	3.4 to 3.54
36% to 45%	3.25 to 3.39
46% to 55%	3.1 to 3.24
56% to 65%	3.0 to 3.09
65% to 80%	2.8 to 2.99
80% to 90%	2.59 to 2.79
90% to 100%	below 2.59

Table 2: Estimating GPAs from percentiles within class

Of particular concern in the US are issues of comparability of courses and qualifications.

Sadler and Tai (2007) noted that honours and advanced placement (AP) science courses are commonly viewed as more demanding than standard high school science. Schools employ a range of methods to account for such differences when calculating Grade Point Average and the associated rank in class for graduating students. In turn, these statistics have a sizeable impact on college admission and access to financial aid. Accounting for variations in college grading systems, the authors found strong evidence in favour of the practice of adding bonus points to students' high school course grades in the sciences, namely, on a 4-point scale, 1 point for AP courses and 0.5 for honours courses.

Wikstrom (2005) describes a Swedish study which investigated the mechanisms behind the increasing Grade Point Averages in Swedish upper secondary schools. Four hypotheses are presented as plausible explanations; improved student achievements, student selection effects, strategic behaviour in course choices, and lowering of grading standards. The analysis is based on extensive data, and focuses on grades and test scores from upper secondary school graduates over a 6-year period. The result shows that the increase in Grade Point Averages cannot be explained by better achievements, selection effects or course choices, which means that standards have been lowered, which is interpreted here as grade inflation. The grade inflation is most likely an effect of the leniency in the grading system in combination with pressure for high grading, related to the upper secondary school grades' function as an instrument for selection to higher education.

In a US study, Grant (2007) investigated how much observed student performance in Microeconomics Principles can be attributed, inferentially, to three kinds of student academic 'productivity': the instructor, demographics, and unmeasurables. He found that individual course grades are highly 'noisy' indicators of academic productivity, more reflective of random or idiosyncratic 'nature' than anything else. While little can be done to improve the accuracy of individual grades, averages of several grades, however, can provide useful information about the productivity of students and the effectiveness of instructors.

Nonetheless, in the US system GPAs themselves are not sufficient evidence for selection. A range of aptitude tests such as the Scholastic Ability Test (SAT) are used, the logic for which is described below by one website offering advice:

> 'It would be unfair to base acceptance to college solely on grades; they can be misleading. For instance, would it be fair to admit a student with an A average earned in easy classes over a student with a B average earned in difficult classes? A school's reputation is too broad a measure to use as admission criteria. Many students seek out easy classes and generous instructors in hopes of inflating their GPA. Furthermore, a system that would monitor the academic standards of every class would be cost prohibitive and stifling. So, until a better system is proposed, the admission test is here to stay.' (Scholastic Assessment Test Educational Testing Service 2007)

SAT reasoning tests and other subject-specific tests banded within five subject areas are offered by college entrance examination boards, and are used by HEIs across the US, the specific test required varying by institution and subject. Thus selection is based on a combination of GPAs, SAT reasoning tests, SAT subject tests, and references. Of course SATs too are subject to criticisms, including the fact that an industry exists preparing students to take the test! A range of similar tests are used for entry to a range of specific fields at graduate level in the US (eg the Graduate Management Admission Test (GMAT) and the Law School Admission Test (LSAT)).

And it is not simply in the US that SATs tests are used. For example, the Swedish Scholastic Aptitude Test (*SweSAT*; *Högskoleprovet*), is a 122 item test used for entry to higher education. In the UK, in addition to the earlier example of Medicine, LNAT, the National Admissions Test for Law, was introduced to select to undergraduate law degrees by eight universities to overcome the difficulties of dealing with an over-supply of students with high A-level grades.

Higher education international grading systems — student mobility and employability

A further important context for grading is student mobility within Europe and the recognition of qualifications within the workplace in a European domain.

Most nations have individual grading systems unique to their higher education institutions. However, the Bologna Declaration signed in 1999 by ministers of education from 29 European countries set in motion a process designed to create a European Higher Education Area (EHEA). The process was opened up to other countries, and further governmental meetings have been held in Prague (2001), Berlin (2003) and Bergen (2005). The Council of Europe and UNESCO have jointly issued the Lisbon recognition convention on recognition of academic qualifications as part of the process, which has been ratified by the majority of the countries party to the Bologna process.The reason given for this is that it will make academic degree standards and quality assurance standards more compatible and comparable throughout Europe, though others argue that it is leading to an unacceptable lowering of standards (Simola, 2006). One of the purposes of the Bologna Process was to implement the European Credit Transfer and Accumulation System (ECTS), claimed to be the only credit system which has been successfully tested and used across Europe (European Commission, 2007). ECTS was set up initially for credit transfer. The system facilitated the recognition of periods of study abroad and thus enhanced the quality and volume of student mobility in Europe. Recently ECTS is developing into an accumulation

system to be implemented at institutional, regional, national and European level. This is one of the key objectives of the Bologna Declaration of June 1999.

The European Commission claims that ECTS makes study programmes easy to read and compare for all students, local and foreign; facilitates mobility and academic recognition; helps universities to organise and revise their study programmes; can be used across a variety of programmes and modes of delivery; and makes European Higher Education more attractive for students from abroad.

The key features of ECTS are:

♦ It is based on the principle that 60 credits measure the workload of a full-time student during one academic year. The student workload of a full-time study programme in Europe amounts in most cases to around 1500 to1800 hours per year and in those cases one credit stands for around 25 to 30 working hours.
♦ Credits in ECTS can only be obtained after successful completion of the work required and appropriate assessment of the learning outcomes achieved. Learning outcomes are sets of competences, expressing what the student will know, understand or be able to do after completion of a process of learning, long or short.
♦ Student workload in ECTS consists of the time required to complete all planned learning activities such as attending lectures, seminars, independent and private study, preparation of projects and examinations.
♦ Credits are allocated to all educational components of a study programme (such as modules, courses, placements, dissertation work, etc) and reflect the quantity of work each component requires to achieve its specific objectives or learning outcomes in relation to the total quantity of work necessary to complete a full year of study successfully.

The performance of the student is documented by a local or national grade. It is good practice to add an ECTS grade, in particular in case of credit transfer. The ECTS grading scale ranks the students on a statistical basis. Therefore, statistical data on student performance is a prerequisite for applying the ECTS grading system. Grades are assigned among students with a pass grade as follows:

♦ A: best 10% — outstanding performance
♦ B: next 25% — very good performance
♦ C: next 30% — good performance
♦ D: next 25% — passable performance
♦ E: next 10% — adequate performance
♦ FX: fail — some more work required before the credit can be awarded
♦ F: fail — considerable further work required

Whilst opposition to the Bologna Process itself, and the principles behind the ECTS, is difficult to locate, the grading mechanisms have been the subject of criticism. Karran (2005) found that the alignment of ECTS grades varies within nation states and shows that, despite the fact that ECTS grading is a norm-referenced system, while national systems are usually criterion-referenced, the ECTS conversion tables provided by universities indicate straight line transference from institutional to ECTS grades. Given increase in student mobility following the EU enlargement to 25 nations, this paper proposes a re-alignment of ECTS towards a criterion-referenced system. Such a new system would acknowledge and build on the diversity of EU higher education systems, unlike the current mechanistic system. The latter masks this diversity and is flawed in calculation and ad hoc in operation. Karran

concludes that: Europe needs a pan-European grading scale after demonstrating the vagaries of the grading systems of some EU countries, notably the UK. He considers that awareness of the Bologna Process is low and that there are incompatibilities both within and between universities.

Even essay marking comes under severe criticism, and McLachlan et al (2000) are quoted as finding that:

> '…there is a widespread illusion that essays are traditionally marked on an interval scale, expressed in percentages, on which arithmetical operations can be carried out. However, essays are marked on an ordinal scale, in which the rank categories are determined by a kind of gestalt perception, sometimes reinforced by criterion guidelines.'

Qualifications and grades are also the means where individuals in one country negotiate access to programmes within other countries, something that is also being encouraged in particular at a European level as a result of the Bologna Declaration and subsequent discussions amongst the European Council of Ministers. In this context equivalence is the main issue and it is notable that a scheme now exists (at a considerable price) for qualifications to be compared using an online tool (eg UK Naric, Grading Transfer System, 2007).

Work is also underway on qualifications frameworks within the Bruges–Copenhagen Process on enhanced European co-operation in vocational education and training (VET). Launched in 2002, this process involves 31 European countries and aims to introduce common reference levels for VET in Europe. A follow-up ministerial summit in Maastricht in 2004 called for the introduction of a credit system (ECVET) for vocational education and training. The European Commission has recently set up an *Expert Group on a European Qualifications Framework* to bring together the initiatives in both the Bologna and Bruges–Copenhagen Processes and 'produce a blueprint of a European qualifications framework'. It is therefore clear that compatibility of qualifications (and consequently of grading) in both VET and HE will assume greater significance in the future.

4 Country studies

Three countries have been selected for special attention: Denmark, Finland and Australia. We begin with Scottish schooling and grading from primary through to secondary and vocational, VET and higher education by way of a reference point. Two countries (Denmark and Finland) are of a similar size to Scotland in terms of population, urbanisation, economies and regional political drivers …although the Nordic region is generally wealthier (Scottish Executive, 2007). They retain a similar adherence to the principles of comprehensive schooling, though there are pressures on the system in all three countries. Denmark and Finland's schooling is organised so that children generally (at present) tend to stay in the same school until the age of 16. These differences and others relating to FE and higher education are explained under the respective countries' headings. Also of interest is the high position of Finland in the OECD PISA tables on all the indicators. Australia retains a similar education system to Scotland particularly at FE, VET and HE level, although with more selection during schooling, and is of course English-speaking.

Denmark

Education and training system

Primary and lower secondary education

Denmark has had a fully implemented comprehensive school system since 1993 but research suggests that it has been difficult for the teachers to apply at school and classroom level (Rasmussen, 2005).

Adapted from Cirius (2007) (an agency under the Danish Ministry of Education for the support of the internationalisation of education and training in Denmark) which merged with CVUU (Centre for Assessment of Foreign Qualifications).
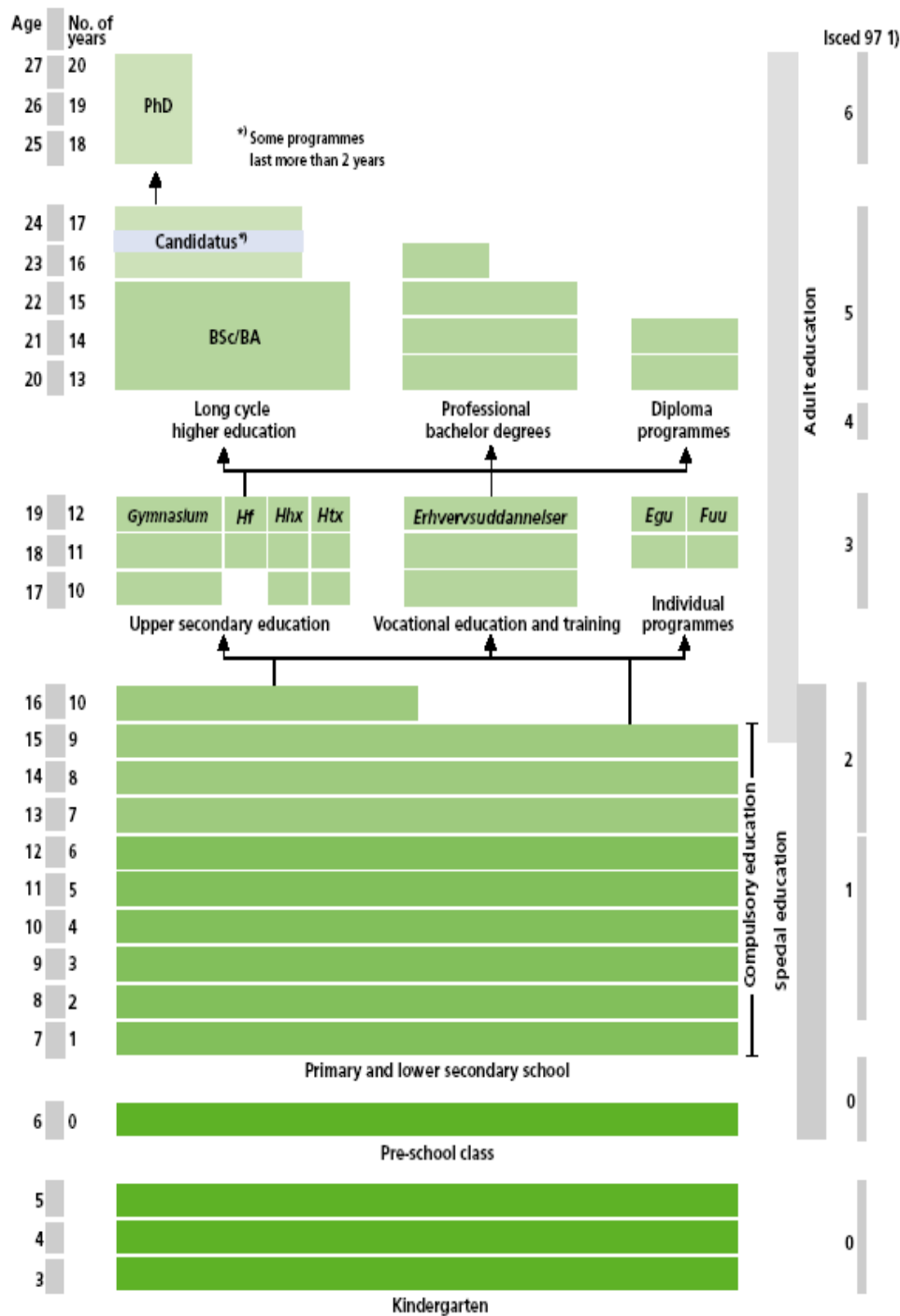
> No distinction is made between primary and lower secondary education in the Danish education system. All children between the age of 7 and 16 must receive education. However, provided a certain minimum standard is obtained, it is a matter of choice for the parents whether the education is received in the publicly provided municipal school (attended by 88%), in a private school (11%) or at home (approximately 1%). Before starting in the 1st grade, children normally attend a one-year pre-school class.

> The *Folkeskole*

> The State school in Denmark is the municipal *Folkeskole*. It is attended by approximately 88% of an age cohort. The *Folkeskole* comprises compulsory education in years 1 to 9 and an optional 10th year (attended by approximately 61% in 2003). Students are taught in classes, and they remain together throughout the entire period of compulsory school. The teaching is differentiated within the framework of the class. There is close co-operation between the school and the parents. The class teacher — normally the Danish teacher — in principle remains the same throughout the whole or greater part of the 10 years. The class teacher co-operates with the pupils on the solution of special tasks in relation to the class, ensures continuity of guidance and maintains maximum contact between the family and the school.

> A growing number of schools now divide the school into stages according to age, with a beginner stage from kindergarten to grade 3, an intermediate stage for grades 4 to 7,

and an upper stage for grades 8 to 10. Unfortunately we do not know how common that is. (Rasmussen, 2005)

Age	No. of years									Isced 97 1)
27	20									
26	19	PhD								6
25	18		*) Some programmes last more than 2 years							
24	17	Candidatus*)								
23	16									
22	15	BSc/BA								5
21	14									
20	13									4
		Long cycle higher education		Professional bachelor degrees		Diploma programmes				
19	12	Gymnasium	Hf	Hhx	Htx	Erhvervsuddannelser		Egu	Fuu	3
18	11									
17	10									
		Upper secondary education				Vocational education and training		Individual programmes		
16	10									
15	9									2
14	8									
13	7									
12	6									
11	5									1
10	4									
9	3									
8	2									
7	1									
		Primary and lower secondary school								
6	0	Pre-school class								0
5										
4		Kindergarten								0
3										

Adult education
Compulsory education
Special education

1) Isced – International Standard Classification of Education – classification of educational levels developed by Unesco.

Figure 1: *Folkeskole* grading and assessment adapted from Wikipedia (2007)

Continuous evaluation in schools

Pupils benefit from the teaching they receive being evaluated on a continuous basis. This evaluation has formed the basis of the guidance of the individual pupil with a view to the further planning of the teaching.

In addition to the basic skills, the *Folkeskole* is required by law to help promote each individual pupil's personal and social development according to his or her capability. Working methods are modified towards the pupil's attainment of greater self-reliance and maturity. This aspect of pedagogic policy requires close co-operation between school and home, and an ongoing dialogue is sought between teachers, parents and pupils.

The Act is very clear on this point, requiring that pupils and parents be regularly apprised of the school's opinion about how each pupil is profiting from his/her schooling. 'Regularly' here means at least twice a year and refers explicitly to information as to the pupil's personal and social development as well as his purely academic attainment.

In the 1st to 7th year, information is given either in writing or, which is more common, as part of the conversational exchanges between all three parties: pupil, parents and class teacher — which are a regular feature of Danish school life.

In the 8th to 10th year, the information system is increased to include a written report at least twice a year giving the pupil's standpoint in academic achievement and in application. For pupils at this level, the evaluation of the level of attainment in the individual subjects is expressed in marks.

Examinations

Currently, school examinations are held at two levels: 1) the leaving examination (after the 9th and 10th year) and 2) the 10th form examination (only after the 10th year). Standard rules have been developed for all the examinations with a view to ensuring uniformity throughout the country. For the same reason, the written examination questions are set and marked at central level.

Examinations are not compulsory. The pupils decide whether or not to sit for examinations in a subject — upon consultation with the school (in practice, their own teachers) and their parents. But in general about 95% sit for the leaving examination after the 9th year of the Folkeskole and 85% to 90% sit for the leaving examination after the 10th year. The percentages vary slightly when considered subject by subject as shown by Anderson (2005) and Glavind (2006).

In the 9th class the pupils have to prepare a compulsory report that especially covers the curriculum in the two subjects History and Social Studies (Eurybase, 2004).

Changes to Danish school culture

Public satisfaction with Danish education in general, and the school system in particular, has been high but international comparisons have shown disappointing results (Egelund, 2005). After the OECD PISA 2001 and 2003 results, Denmark's performance was described by the country's Ministry of Education as 'mediocre' (*Undervisningsministeriet*, 2004) and an OECD evaluation team was appointed (led by Peter Mortimore, former Director of the London Institute of Education and a keen school effectiveness advocate). The subsequent report identified a number of positive attributes of the Danish system, notable for its lower secondary comprehensive schools providing continuous education from age 7 to 16,

including decentralisation with scope for innovation and sustained investment over a long period and frequent opportunities for parental choice. However, a number of weaknesses were also identified by the review including considerable underachievement and the lack of a strong culture of student evaluation and consequent inadequate feedback. The identification of attainment levels achieved in school subjects was seen as a key issue by the ministry (*Undervisningsministeriet*, 2004, Egelund, 2005) as part of a much stronger focus on evaluation in the education system generally.

Egelund (2005) identifies the lack of marking before grade eight (when pupils are aged 15) and no national tests of proficiency until grade nine as possible contributors to Denmark's relatively low place in the tables, considering the high expenditure on education. The pressure from this perceived underperformance is resulting in an increase in the use of external standardised examinations to provide accountability data to parents, the public, and various stakeholders.

According to Egelund, the latest Act (2003) is the result of a development which began about eight years before, when the central government established new powers in relation to examinations and testing. From 1975, the end targets for the final exam had been the *Afgangsprove* taken after nine or ten years of *Folkeskole*, with little or no testing prior to that. The 2003 Act — which only marginally passed through Parliament as it was considered un-Danish, issues guidelines for competences to be achieved in each subject in the *Folkeskole* at two-year intervals. Additionally, from 2002 the results from the *Afgangsprove* after nine years of *Folkeskole* and the *Studentereksamen* after three years of upper secondary school have been published on the homepage of each school and on the Ministry of Education website. In this way, concludes, Egelund, the Danish education system is in a transition between an emphasis on 'inputs', such as resources per student, to 'outcomes', such as results from the end tests and examinations, the latter being instigated by an Act dealing with 'openness and transparency' of information.

Changes to be introduced

This section is based on a statement by the Minister for Education made in 2006 and reported on the *Undervisningsministeriet*.

Continuous evaluation was introduced in the *Folkeskole* Act of 1993. It is the implementation of this kind of evaluation that has been difficult for teachers to handle. Politicians and professionals were surprised to see from the PISA 2003 results that as many as 17% of Danish 15 year olds are shaky or poor readers. The view is that this should have been discovered much earlier. National tests are supposed to be an answer to the problem.

In 2006, the Minister for Education stated: 'One of the major problems of the Danish school system is precisely that schools fail to pay sufficient attention to the development of the knowledge and skills of the individual student in the course of primary and secondary school. The first official testing of this has so far been the final test after ninth grade, at which point it is undeniably too late to remedy shortcomings arising from what the pupil has *not* learned.'

In 2004, a report from the Danish Evaluation Institute found that primary and lower secondary schools had not implemented the testing regime laid down by the 1993 *Folkeskole* Act whereby running tests and evaluations were to be integrated into teaching activities and the OECD report (2004) came to the same conclusion. To rectify this 'an extensive pedagogical tool kit' is to be made available to the individual teacher, with information on evaluation methods and initiatives to be taken where pupil progress is poor in a given subject.

In addition, during the course of primary and lower secondary education four reading tests, two mathematics tests and one test in each of the four subjects of English, Physics or Chemistry, Geography and Biology will have to be taken (ie ten in total). The tests will be developed on the basis of the most recent research on each subject area and be adaptable to the level of individual pupil, as determined 'by some initial questions'. This process, the Minister explains, 'provides a profile which the teacher can apply to the teaching approach. The tests take up a relatively modest amount of time (approximately ten hours of the approximately 7,000 hours that make up the course of primary and lower secondary school), but they constitute a solid investment in monitoring the progress of a pupil and in dealing proactively with poor learning results'.

Mandatory IT-based tests were introduced in Danish/reading at 8th grade; Maths at 6th grade and Physics/Chemistry at 8th grade in 2006/07; Danish/reading at 2nd, 4th, 6th grade; English Language at 7th grade; Maths at 3rd grade; and Geography and Biology at 8th grade in the following years. The test in Physics/Chemistry at 8th grade was applied recently at 235 schools. There is no information in English about the grading mechanisms used although there is a demonstration test on the Danish Ministry of Education's website (*Undervisningsministeriet*, 2007) in Danish. As they are IT-based, the tests are graded automatically and at the end of the demonstration test the result is shown. This is not the case in the national tests themselves as the children complete them. Here it is the teacher that communicates the results to the students.

The test results are confidential to the individual pupil, the class, the school, the municipality and the region — and 'may *not* be applied to ranking the pupils. Each year a national performance profile will be published *at national level* for the individual subjects, so that for instance the teacher will be able to compare the results of a given class with the general achievement level for Denmark as a whole.

The tests are to address the lack of written assessment so individual learning plans will be put in place for all pupils which must contain information on the results of the running evaluation and indicate the follow-up chosen to remedy shortcomings. A number of schools all over Denmark have already developed individual learning plans for all pupils, at their own initiative, with the aim of providing teachers, pupils and parents with a 'proactive instrument for strengthening the learning of the individual student in relation to the currently applicable goals of the subject taught'. Targets will be set for each pupil and progress monitored and followed up because: 'Proactive focus on a documented basis is decisive for the necessary follow-up'. The stronger line being taken by the Ministry is further evidenced by the decision to make the hitherto optional tests at the end of *Folkeskole* obligatory. The new testing regime is to be used to exercise an unprecedented central government control over the Danish education system at municipal and school level as 'the bill incorporates the demand that municipalities must draw up a quality report every year to describe the schools of the municipality, the academic level achieved and the pedagogical development, etc'.

Upper secondary

Education programmes for those aged around 16 to 19 are often called 'youth education programmes' in Denmark. These include general and vocational upper secondary education programmes, which primarily prepare for higher education, and vocational education and training programmes primarily aimed at preparing students for a career in a specific trade or industry. Around 95% of all school leavers continue in one of these programmes.

General upper secondary education

The three-year *Gymnasium* (*STX* — leading to the schools leaving examination: *studentereksamen*) and the two-year Higher Preparatory Examination Course (HF — *Højere forberedelseseksamen*) are academically oriented programmes preparing pupils for further studies and at the same time developing their personal and general competencies. The programmes aim at enhancing the students' independent and analytical skills, as well as preparing them to become democratic and socially conscious citizens with a global outlook, and comprise a wide range of both compulsory and optional subjects at different levels. The curriculum and examinations must follow national standards and are subject to external evaluation. Apart from subject-specific oral and written examinations, students must also prepare one or two major written assignments.

Admission requirements for STX are nine years of basic school as well as certain subject requirements. For HF, admission requirements are 10 years of basic school or the equivalent thereof. STX is for those aged 16 to19, whereas HF attracts both young people and adults. These programmes take place at upper secondary schools — *gymnasier*. The HF programme can be taken on a single-subject basis and is also taught in evening classes.

Technical and commercial upper secondary education

The three-year HHX (Higher Commercial Examination) and HTX (Higher Technical Examination) grant access to higher education in line with general upper secondary school, but prepares especially for higher business or technical programmes. HHX and HTX qualify students for employment in trade and industry — usually in training positions. The curriculum consists of both general upper secondary subjects and financial and business as well as technical subjects, respectively. These programmes take place at business/commercial or technical colleges, known under one heading as vocational colleges.

Vocational education and training

Vocational education and training includes the vocational education and training programmes (VET), the social and health education programmes (SOSU) as well as other programmes within the fields of agriculture, forestry, maritime studies, etc. The VET programmes make up the major part of vocational education and training. VET programmes are of two to five years' duration, the most typical being three and a half to four years. They consist of an initial basic programme with a choice of one of the following seven access routes:

♦ building and construction
♦ crafts and engineering trades
♦ food production and catering
♦ mechanical engineering, transport and logistics
♦ service industries
♦ technology and communication
♦ the commercial field — trade, office and finance

These basic programmes constitute the basis for admission to one of the 85 main programmes of vocational specialisation. All VET programmes are sandwich-type programmes in which theoretical and practical education at a vocational college (30 to 50% of the time) alternates with practical training in an approved company or organisation (50 to 70% of the time). VET programmes are normally completed with a journeyman's test (*svendeprøve*) or a similar examination testing vocational skills, knowledge and attitudes.

Admission to vocational education and training requires completion of compulsory education. All programmes qualify pupils for labour market entry as skilled workers. In addition, most programmes qualify pupils for direct admission to certain types of higher education programme. The VET programmes take place at vocational colleges, technical colleges, or business colleges. The social and health education programmes at special SOSU colleges.

Admission requirements

In order to enrol for upper secondary education and training, students must have completed nine to ten years of basic education, depending on the programme applied for. Each school is in charge of enrolling the students based on an application form distributed by the individual school. The schools are also responsible for assessing qualifications and exams obtained abroad and deciding what credit is transferable to the Danish system.

Tuition and ownership

The Ministry of Education is responsible for the legislative framework, and tuition at public schools is free for citizens from the Nordic and EU countries. For other nationals, certain schools may claim a tuition fee. The upper secondary schools are owned and financed by the county in which they are situated, whereas the vocational colleges are state-funded, self-governing institutions. Some of the schools are privately owned and set their own fees. These range from DKK 30,000 to DKK 85,000 per year.

Adult vocational training in Denmark

Adapted from *Undervisningsministeriet* Factsheet (2006)

> Short vocational training programmes are mainly for low skilled and skilled workers on the labour market. These programmes were transferred from the Ministry of Labour (now the Ministry of Employment) to the Ministry of Education in 2001. Co-ordination with other education and training programmes, eg general education programmes and programmes for adults with special needs (in reading, writing and mathematics) was strengthened and at the same time the close co-operation with the enterprises and social partners was sustained.

From 2001 to 2003 the content, organising, governance and financing of adult vocational training programmes underwent a comprehensive reform and a new Act (Act Number 446 of 10 June 2003) on adult vocational training was implemented 1 January 2004. The programmes serve a triple purpose:

♦ to provide, maintain and improve the vocational skills and competences of the participants in accordance with the needs and background of enterprises, the labour market, and to further competence development of the participants in line with technological and societal developments
♦ to solve labour market restructuring and adaptation problems in a short-term perspective
♦ to contribute to a general upgrading of skills and qualifications of the labour force in a long-term perspective

The adult vocational training programmes lead to nationally recognised competences on the labour market and at the same time they aim to serve specific regional, local or enterprise-based demands for skills and competences. All programmes are developed by social partners and approved by the Ministry. They are mainly relatively short vocational training programmes where the duration varies normally from half a day to six weeks (on average,

one week). It is possible to combine adult training programmes in the same job area or to supplement a programme with more specialised programmes in a field. There are approximately 2,500 different adult vocational training programmes and 300 single subject courses from the mainstream vocational training and education programme, all of which can be combined. In addition, there are specific programmes for individual competence assessment (IKA) with the aim of giving credit for already acquired competences and supporting the individual composition of an individual training plan including one, or several, training programmes for the participant. The specific field and content of the programmes reflect development and demands from sectors with many low skilled and skilled employees. Approximately 500 programmes are developed or revised every year.

In general there are three main types of programme directed at:

♦ specific job/sector related competences, eg crafts, technical insight and knowledge of materials
♦ general competences, eg ICT, languages
♦ personal competences, eg social communication, organisation and management

It is possible to combine several programmes.

The joint competence descriptions

The joint competence descriptions (FKB) were introduced in the law of 2003. This was a shift from thinking in terms of vocational training programmes to identifying *labour market competences* or job areas, so the many and very specialised adult vocational training programmes are now organised in relation to different areas of employment with their profile and demand for labour.

To give an overview of all adult vocational training programmes for providers, institutions and guidance staff, the programmes have been organised in approximately 130 joint competence descriptions equivalent to 130 *job areas*.

A joint competence description groups the programmes relevant for up-skilling and qualifying in one specific job area. It is possible to choose one or a number of programmes fitting the individual needs for further competences.

A competence description consists of:

♦ a description of the typical workplace
♦ relevant competences at that workplace
♦ a list of adult training programmes or single subject courses leading to those competences

The training programmes listed in a competence description are mainly vocational training programmes, but programmes in general subjects may also be included, eg in vocational Danish, mathematics or foreign languages. The programmes may be specifically developed adult vocational training programmes or single subjects selected from vocational education training programmes for young people.

Certification — further education

On completion of a programme, the participant receives a certificate qualifying them for the national labour market. For about 110 of the training programmes the participants pass an exam and receive a formal, qualifying certificate for the labour market that is recognised by the legal authorities.

Certificates from adult vocational training programmes do not give direct access to further education in mainstream education or in other adult education and training programmes.

Participants who want to continue in education and training programmes corresponding to mainstream vocational education and training, or in higher education programmes, may be assessed on their prior learning after which they may receive a credit transfer — ie they may have access to the basic adult education programme (GVU) or vocational education and training programmes for adults (Adult VET). GVU and Adult VET programmes give the same formal qualification for the labour market and for further studies, as the corresponding programmes for young people. At the higher education level they may have access to continuing professional education programmes (further adult education/short-cycle higher education programmes).

Running the programmes — training providers

There are about 140 schools providing adult vocational training programmes all over the country — the principle being to offer training programmes in all regions. Mainly public, but also a number of private schools, provide adult vocational training programmes.

The providers are adult vocational training centres, vocational technical colleges, commercial colleges, agricultural colleges, social and health service schools etc.

The training activity may take place during or outside working hours in the daytime or in the evening, on weekdays or at the weekend, and throughout the year.

Training is carried out by teachers with vocational and adult pedagogical education experience. The training is mainly organised as open workshops where participants may follow different programmes at different levels in the same room with the same teacher. It is also possible to organise training at the workplace.
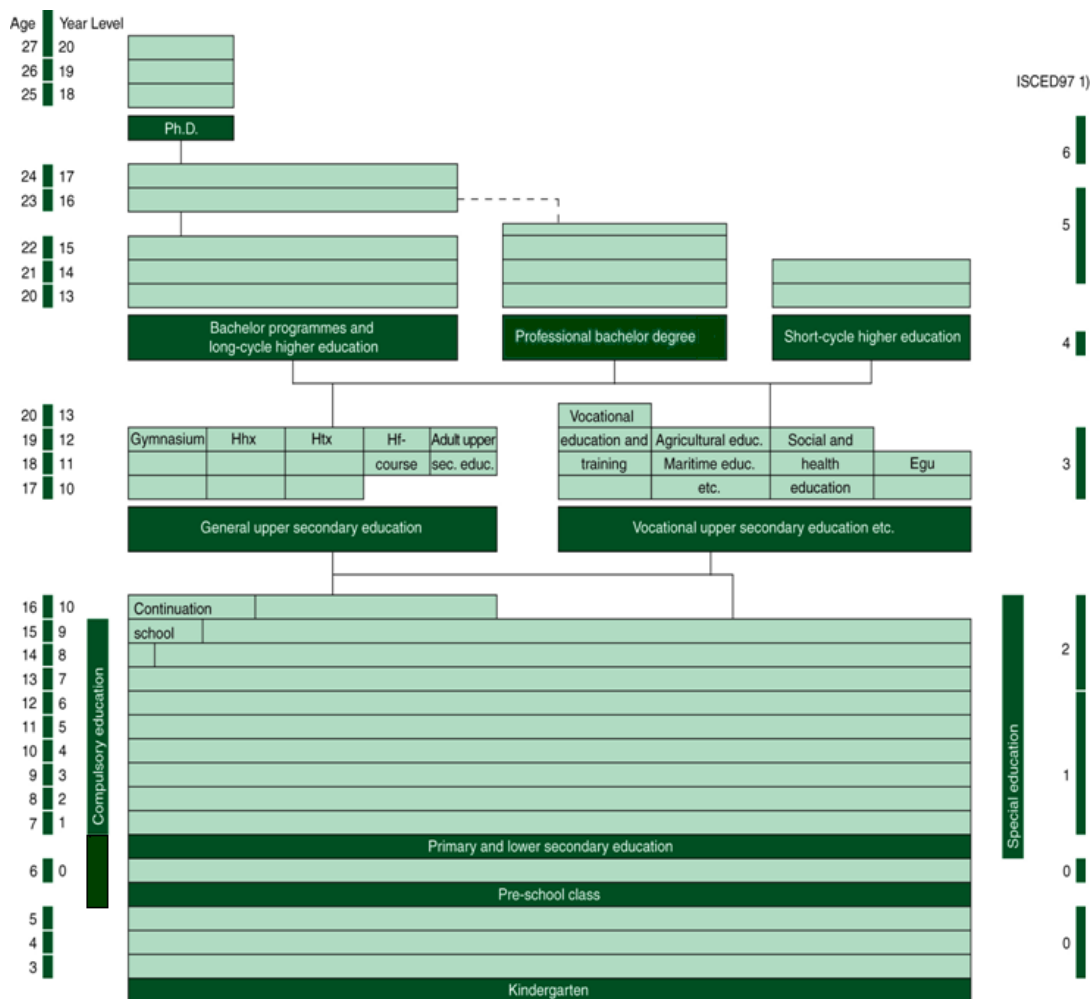
The Danish education and training system

Figure 2: The Danish education and training system (*Undervisningsministeriet*, 2009)

Higher Education changes

Adapted from The Danish University and Property Agency website (2007)

From 2007, Denmark will obtain fewer, stronger universities and a new framework for research services for the public authorities. This new map of academic Denmark is the result of a thoroughgoing reform of the university and research area aimed at stabilising the university structure, as well as future-proofing the universities and strengthening them for global competition. The current 25 research institutions will be reduced to 11, and 97% of their activities will be concentrated in seven universities. The remaining 3% will be divided between four smaller institutions. The intention is to carry out the changes as soon as possible. Accordingly, the university mergers and the integration of the government research institutes in the universities are expected to enter into force as of 1 January 2007, with 2007 as a transition year. A merger of the Danish University of Education with the University of Copenhagen is expected to be carried out by 1 January 2008.

It is not clear from the information available from the Danish University and Property Agency, part of the Ministry of Science, Technology and Innovation which is responsible for introducing and executing the changes, whether the following description of the system will apply after these various mergers.
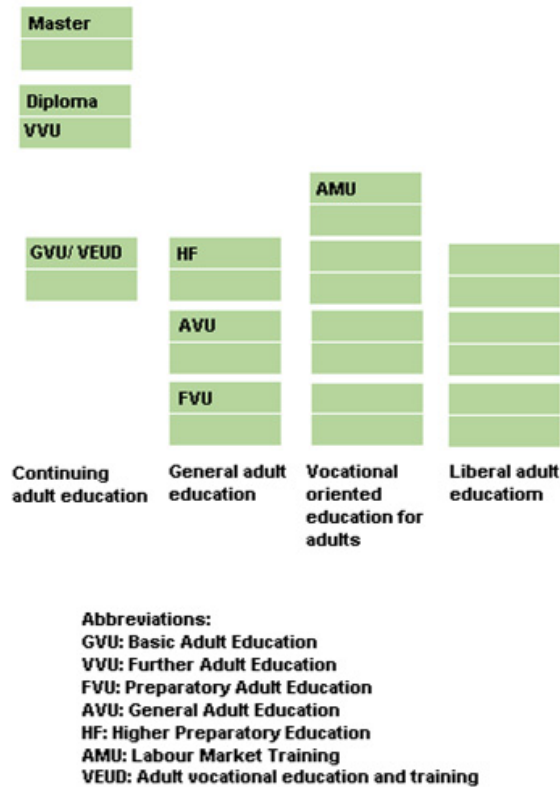

Abbreviations:
GVU: Basic Adult Education
VVU: Further Adult Education
FVU: Preparatory Adult Education
AVU: General Adult Education
HF: Higher Preparatory Education
AMU: Labour Market Training
VEUD: Adult vocational education and training

Figure 3: Higher Education in Denmark (*Undervisningsministeriet*, 2009)

Currently, higher education is divided into short-cycle (18%), medium-cycle (39%) and long-cycle (43%) higher education programmes; 44% of an age group attends the programmes. Institutions are grouped into two different sectors, the college sector, ie the professionally oriented higher education sector and the university sector.

The college sector comprises more than 150 specialised institutions of higher education, about one-third offering short-cycle and two-thirds offering medium-cycle professionally oriented programmes. Increasingly, colleges are merging into larger and more diverse units. The institutions that have specialised in short-cycle higher education are merging to form Business Colleges (in Danish: *Erhvervsakademier*), and institutions that have specialised in medium-cycle educations have formed a number of Centres for Higher Education (Danish acronym: CVU). Colleges often co-operate closely with each other or with universities. It is mandatory for the CVUs to co-operate with the university sector. All CVU study programmes are research-affiliated.

The university sector includes 11 universities, five of which are multi-faculty universities. The other six specialise in fields such as Engineering, Education, Veterinary Science, Agriculture, Pharmacy, or Business Studies. In addition, there are a number of specialist university-level institutions in Architecture, Art, Music, etc. All university study

programmes are research-based, and degrees are awarded at undergraduate and postgraduate level including doctoral degrees.

Admission to higher education

General access requirements to Higher Education in Denmark are 12 years of education including secondary school or comparable qualifications. Three to four year vocational study programmes supplied with relevant upper secondary courses often qualify for a short-cycle college programme within the same field or to some medium-cycle college programmes. Admission to many study programmes also depends on the fulfilment of specific requirements. These may either be a specific subject combination or requirements concerning the level of the subjects taken, the grades obtained, work experience etc. Numerous clauses exist for a small number of study programmes.

College qualifications

College programmes are professionally oriented higher education.

Short-cycle professional qualifications:

Diplomas are awarded after a two year vocational academy programme (*erhvervsakademiuddannelse*) building upon either relevant vocational education and training or general upper secondary education. Most programmes give access to further studies within the same field, eg bachelor programmes.

These programmes qualify the student for performing practical tasks on an analytical basis. Apart from theoretical subjects, programmes are usually completed with a project. The fields of study are for example: Agriculture, Textile and Design, Food Industry, Construction, Hotel and Tourism, Computer Science, Industrial Production, Laboratory Technician, IT and Communication, and International Marketing.

Medium-cycle professional qualifications:

Diplomas are awarded after a three to four year programme at a level corresponding to a university Bachelor programme, but the medium-cycle programmes usually prepare students for a profession. Examples are: teacher training programmes, programmes in social work, journalism, nursing, engineering etc. These programmes provide students with theoretical knowledge as well as knowledge of application of theory to professions and industry. All programmes include periods of practical studies and require the submission of a project/project paper. Most programmes give access to further studies in the same field, ie a Master's programme or, on certain conditions, a specific *candidatus* programme.

Professional Bachelor's degrees (*professionsbachelor*) are awarded on completion of programmes that meet a number of criteria, such as links to research and development. University Qualifications Study programmes in the university sector are research-based, analytical and theoretical. They provide a broad academic foundation as well as specialised knowledge.

Medium-cycle research-based qualifications:

The Bachelor's degree (*BA/BSc*) is awarded after an undergraduate programme of three years of study, normally concentrated on one or two subjects. Programmes are self-contained and qualify both for occupational functions and for studies for the *candidatus* degree.

Long-cycle research-based qualifications:

The *candidatus*(a) (*cand*. + field of study) is awarded after a total of five years of study, normally a BA/BSc + two years of study. (The degree in Medicine is though awarded after a total of six and a half years of study.) The programmes qualify students for occupational functions and scientific work. Each *candidatus* programme must include one or two of the major fields of study of the Bachelor programme. It includes the preparation of a thesis of half a year's duration. Universities also offer international Master programmes of one to two years' duration.

A less frequent degree, the *Mag.art.* (BA +3 *years*), is awarded following research-oriented studies in one subject and the defence of a thesis.

Doctorates:

The PhD degree is awarded after a total of approximately eight years of higher education and research, including the preparation and public defence of a thesis. Admission requirements are normally a *candidatus* degree and the programme itself lasts three years.

The adult education system:

Alongside the ordinary higher education system, the adult education system offers advanced adult education comparable to the level of short-cycle higher education, it offers Diploma programmes comparable to the level of medium-cycle higher education, and Master programmes (eg MBA) comparable to a long-cycle higher education level. Most programmes consist of two years of part-time study, equivalent to one year of full-time study. Admission requirements are a relevant educational qualification and at least two years of work experience within a relevant profession.

Higher education grading system

Until 2007, the Danish gradation scale was called the 13-scale and consisted of 10 grades ranging from 00 to 13, with 00 being the worst.

Grade	Given for...
00	the completely unacceptable performance
03	the very hesitant, very insufficient and unsatisfactory performance
5	the hesitant and not satisfactory performance
6	the just acceptable performance
7	the mediocre performance, slightly below average
8	the average performance
9	the good performance, a little above average
10	the excellent but not particularly independent performance
11	the independent and excellent performance
13	the exceptionally independent and excellent performance

Table 3: 13-scale grading system

The gaps between 00 & 03, 03 & 5 and 11 & 13 were there to signify a larger difference between those grades. The leading 0 in 00 and 03 were used to prevent fraud with grades (as otherwise a student could have added a leading 1, yielding a perfect 13). The highest grade 13 and the lowest grade 00 were the grades most rarely given. A grade of 00 was nearly impossible to achieve, presuming one knows even a single fact taught in that particular class, it is given for the truly incompetent performance. At exams, 00 was given to absentees. A 13 was a fairly rare grade outside of exams and required a performance way beyond the expected. The average of grades given in Danish high schools in 2003 was 8.22.

The year 2007 saw the introduction of a new grading system in Denmark. There is no evidence that the old 13-level system was not fit for purpose but it did not fit easily with the ECTS scale.

New system

The new system functions as follows:

Grade	Description		13-scale-equivalent	ECTS-equivalent
−3	entirely inadequate		00	F
0	Inadequate		5	Fx
2	adequate	the minimum acceptable, minimum passing grade	6	E
4	fair	numerous considerable flaws	7	D
7	good	numerous flaws	8 & 9	C
10	excellent	few considerable flaws	10	B
12	outstanding	no or few inconsiderable flaws	11 & 13	A

Table 4: New grading system

Furthermore, the *Undervisningsministeriet* (the Ministry of Education) will adapt to a more international way of grading, by handing out a set amount of grades per class, this is due to the fact that in foreign countries, the grade A (12) is handed out twice as often as in Denmark (because of the strict, absolute grading in Denmark).
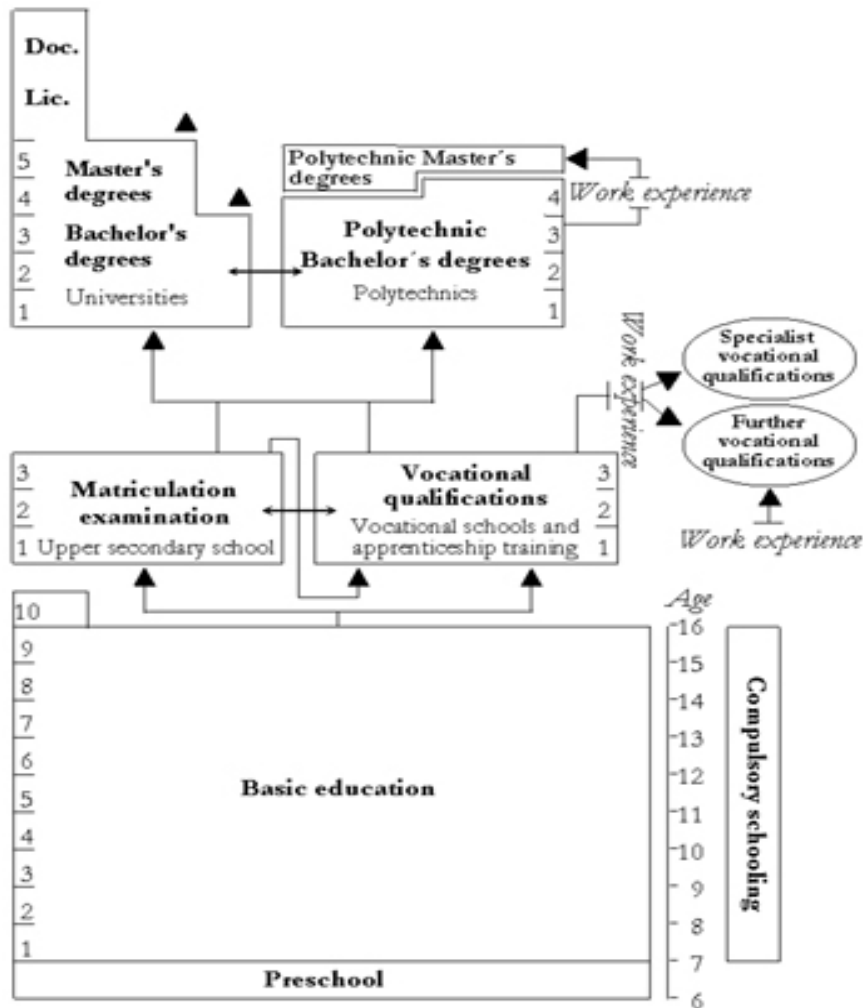
Finland

The education system of Finland

Figure 4: The education system of Finland (Finnish National Board of Education, 2009)

Basic education

Adapted from The Finnish National Board of Education (2007) website:

> Basic education includes a one-year long voluntary pre-primary education in a school or day-care centre. Generally, compulsory education is provided in primary/lower secondary (continuous) schools (Finnish *peruskoulu*, Swedish *grundskola*, 'basic school') from years 1 to 9, that is, from age 7 to 15/16. For the first six years, education is provided by the class teacher who teaches all or most subjects with separate subjects usually taught by different subject teachers in the last three years.

> Basic education is governed by the Basic Education Act (628/1998) and Basic Education Decree (852/1998) and the Government Decree on the General National Objectives and Distribution of Lesson Hours in Basic Education (1435/2001). These regulations stipulate such matters as the core subjects taught to all pupils, and the distribution of teaching hours between various subjects. The National Board of Education decides on the goals and main content of basic education by setting the national core curriculum including cross-curricular themes which integrate upbringing and education and which are used to

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respond to changing educational challenges. The latest guidelines for the National Core Curriculum for basic education were issued in 2004.

Education providers draw up local municipality-specific or school-specific curricula based on the guidelines for the national core curriculum and legislation. The curriculum guides the school's practical teaching and educational work. Parents have the opportunity to participate in drawing up the school's curriculum and in determining educational objectives.

At the end of the nine years, there are no exams. Instead, a final certificate is given for completing the syllabus. Basic education prepares the children for all upper secondary education. Learning outcomes are excellent when compared internationally. Pupils who have completed basic education are eligible for voluntary additional education (grade 10) that lasts one year.

Basic education is also available for adults, and is provided by general upper secondary schools for adults and adult education centres.

Upper secondary education

Adapted from Wikipedia (2007)

The education after primary/lower secondary school is divided into vocational and academic systems. The systems do not traditionally interoperate, although some of the *de jure* restrictions have been recently lifted. In particular, the Finnish system differs from other countries in that there is no common 'youth school'. Young people from aged 16 to 19 attend either a vocational/trade school (*ammatillinen oppilaitos*, *yrkesinstitut*), or an academically-oriented upper secondary school (*lukio*, *gymnasium*). As for primary, secondary education is funded by the municipality, and a free lunch is served.

Vocational school develops vocational competence and as such does not primarily prepare for higher education, although the vocational school graduates are formally qualified for entering tertiary education. Thus, unlike Sweden, Finland separates the vocational and general secondary education programs. Integration was tried (called 'youth school' experiments) but the conclusion was to keep them separate. Trade school graduates may enter the workforce directly after graduation.

Upper secondary school, unlike vocational school, concludes with a nationally graded matriculation examination (*ylioppilastutkinto*, *studentexamen*) which is held in high esteem.

Special programmes exist in vocational institutes which either require a matriculation examination, or allow the student to study for the matriculation exam in conjunction with vocational education. The latter are unpopular, because they equate to going to two schools at the same time and usually take four years.

Upper secondary school graduates are taught no vocational skills and are expected to continue to tertiary education.

The Finnish Matriculation Examination

Source *Ylioppilastutkinto* (2007)

Passing the Matriculation Examination entitles the candidate to continue his or her studies at university. The system is designed so that approximately the lowest scoring 5% fails, and also 5% get the best grade. The exam allows for a limited degree of specialisation in either Natural Sciences or Social Sciences. Universities may use the test score in the matriculation examination to accept students. The purpose of the examination is to discover whether pupils have assimilated the knowledge and skills required by the curriculum and reached an adequate level of maturity in line with the goals of the upper secondary school. The Matriculation Examination Board is responsible for administering the examination, its arrangements and execution. The Board issues guidelines on the contents, the arrangements and the assessment of the tests. The Ministry of Education nominates the Chair of the Board and its members (about forty in number) at the suggestion of universities, institutions of higher learning and the National Board of Education. The members represent the various subjects covered by the Matriculation Examination. About 330 associate members assist the members in the work of preparing and assessing the tests. The technical arrangement of the tests is taken care of by the Board's secretariat, which has 22 civil service employees.

The Matriculation Examination is held twice a year, in spring and in autumn, in all Finnish upper secondary schools, at the same time.

A candidate must complete the examination during not more than three consecutive examination periods. The examination can also be completed in one examination period — most take the latter route.

Tests

The compulsory and optional tests

The examination consists of at least four tests; one of them, the test in the candidate's mother tongue, is compulsory for all candidates. Candidates then choose three other compulsory tests from among the following four tests: the test in the second national language, a foreign language test, the mathematics test, and one test in the general studies battery of tests (Sciences and Humanities). There are additional optional tests.

The headmaster of the upper secondary school will check to see whether the candidate fulfils the requirements laid down concerning participation in the examination and in the tests that are part of it.

The levels of the tests

Tests are arranged at two different levels, according to difficulty, in Mathematics, in the second national language and in foreign languages. The levels in Mathematics and in foreign languages are the advanced course and the basic course, and in the second national language the advanced course and the intermediate course. The candidate may choose which level of each of the above-mentioned subjects he or she takes, regardless of his or her studies at the upper secondary school. The candidate must pass a test based on the advanced course in at least one compulsory test. The candidate may take only one test in the same subject on the examination.

Descriptions of the tests

The mother tongue test is arranged in Finnish, Swedish and Saami. These Finnish and Swedish tests have two parts: a textual skills section and an essay. In the textual skills tests the candidate's analytical skills, and linguistic expression is measured. The essay focuses on their general level of education, development of thinking, linguistic expression and coherency. The weighted sum of points determines the grade on the mother tongue test. The second national language tests and the foreign language tests include sections for listening and reading comprehension and sections demonstrating the candidate's skill in written production in the language in question. In the Mathematics test the candidate must complete 10 questions. The candidate is allowed to use calculators and books of tables that have been approved by the Board as aids. The general studies battery includes tests in Evangelical Lutheran religion, Orthodox religion, Ethics, Philosophy, Psychology, History, Social Studies, Physics, Chemistry, Biology, Geography and Health Education. Furthermore, the tests incorporate questions which cross the boundaries of these disciplines. Depending on the test in question, the candidate answers six or eight test items.

Certificates

The Matriculation Examination Certificate

A candidate receives a Matriculation Examination Certificate following the examination period when all the compulsory tests have been passed. The Matriculation Examination Certificate shows the compulsory and the optional tests passed, and their levels and grades. The grades and corresponding points are as follows:

♦ laudatur (L)   7
♦ eximia cum laude approbatur (E)   6
♦ magna cum laude approbatur (M)   5
♦ cum laude approbatur C)   4
♦ lubenter approbatur (B)   3
♦ approbatur (A)   2
♦ improbatur (I)   0

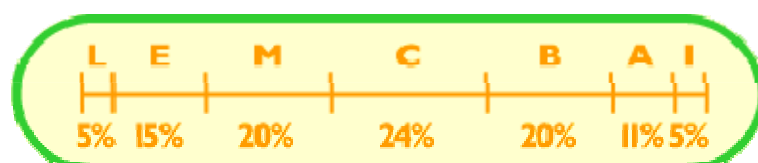The grades are given for the tests more or less as follows:

Figure 5: Matriculation Examination Certificate grades (*Ylioppilastutkinto, 2007*)

The relative shares of grades differ somewhat in various tests and in various examination periods.

Schooling and grading

PISA studies

Most notable in recent times is Finland's consistent success in the OECD international league tables produced by the PISA studies. Finland has consistently been among the highest scorers worldwide; in 2003 Finnish 15-year-olds came first in Reading Literacy, Mathematics, and Science, while placing second in Problem Solving, worldwide. In tertiary education, the World Economic Forum ranks Finland first in the world in enrolment and quality, and second in Maths and Science education.

Simola (2005, p. 467), contextualising similar successes in the 2001 PISA results, points to the need for historical context to understand them. As a late-comer to industrial society, Finnish teachers 'believe in their traditional mission to be model citizens and transmitters of knowledge', and this is accepted by pupils. At the same time, teachers have historically, and successfully, fought for recognition and status and are highly trained. The Teacher Education Reforms of 1973 to 79 created brand-new university faculties and raised training to Master's degree level. It was swiftly followed by the General Syllabus and Degree Reform in Higher Education (1977 to 80) which abolished the Bachelor's degree, though this was brought back in 1994 and is now being strengthened through the Bologna Process. But Simola paints a rather conservative picture of Finnish education and teachers, quoting a 1996 study by East Anglian academics '… which identified strong conservative pedagogic tendencies and identifying teacher professionalism as a striving for social status'. At the same time arguably she underplays the Comprehensive School Reform (1972 to 77) which 'abolished the dual-track school system of eight-year compulsory school and parallel grammar school and replaced it with the single, mixed-ability comprehensive school in which the whole cohort of pupils was educated for nine years' (p467). Nonetheless, whilst acknowledging the good technical execution of the PISA assessments, she makes the point strongly that 'they contribute to what Nóvoa and Yariv-Mashal (2003) call processes of 'international spectacle' and 'mutual accountability' rather than processes of improvement and development' and fail to take into the rather singular nature of the Finnish situation borne from its recent history.

Testing and grades

Finland has never had a tradition of nationwide standardised testing at the comprehensive school level. It was not until 1999 that the obligation to practice evaluation was formalised and the first surrogate control mechanism, the standard scale for giving marks on the comprehensive school graduation certificate (Opetushallitus, 1999), was introduced (Simola, 2005).

Tertiary education

As the trade school is considered a secondary school, rather than further education, the term 'tertiary education' refers to institutes of higher learning, or what is generally considered university level elsewhere. Therefore, plain figures for tertiary level enrolment are not internationally comparable. The tertiary level is divided into higher vocational schools (*ammattikorkeakoulu*) and universities.

Higher vocational schools (ammattikorkeakoulu, yrkeshögskola, known as AMK)

Source Wikipedia (2007)

When recruiting new students, the national matriculation examination and entrance examinations are used as criteria for student selection. The focus for universities is research, and they give a more theoretical education. The polytechnics focus on practical skills and they seldom pursue research, but they do engage in industry development projects. Physicians are university graduates, whereas nurses are polytechnic graduates. The vocational schools and polytechnics are governed by municipalities, or in special cases, by private entities. (As an exception to the rule, the Police College is governed by the Ministry of the Interior.) All Finnish universities, on the other hand, are owned by the state. A Bachelor's degree takes about 3 to 4 years at a university. Depending on the programme, this may be the point of graduation, but is usually only an intermediate step towards the Master's degree. A polytechnic degree, on the other hand, takes about three and a half to four and a half years. A degree from a polytechnic is not, however, considered legally equivalent to a lower university degree in the Finnish system. Outside of Finland, polytechnic degrees are generally accepted as lower university degrees.

Polytechnic-graduated Bachelors are able to continue their studies by applying to Master's degree programmes in universities. These take two years in general, but the polytechnic graduates are often required to undertake about a year's worth of additional studies to bring them on the level with the university graduates. The Bologna Process has progressively lowered the amount of required additional studies and in some cases no additional study is needed. After the polytechnic, graduates have three years' work experience in their field and they are also qualified to apply for a polytechnic Master's degree-programme (lower university degree graduates are qualified also, but with additional studies) which are work-oriented — not academic. The polytechnic Master's degree programme takes two years and can be undertaken in conjunction with regular work. The number of polytechnic Master programmes is limited — as are the available fields. Polytechnic Master's graduates (but not Bachelor's degrees) are considered equivalent to academic Master's graduates in similar fields although apart from in Business and Engineering, there are few commonalities. After a Master's degree, the remaining degrees (Licentiate and Doctorate) are available only from universities. The polytechnic Master's degree does not qualify a student for graduate studies at doctoral level.

Some universities give professional degrees in fields such as Engineering and Medicine. They have additional requirements for completion, such as demonstrations of competence during placements.

Examples:

♦ *Lääketieteen lisensiaatti*, Licentiate of Medicine. A Bachelor of Medicine (*lääketieteen kandidaatti*) is allowed to conduct clinical work under the supervision of senior medical staff. There is no Master's degree, and the licentiate degree does not require a full doctoral dissertation. Common physicians are therefore not doctors, but licentiates. The research or 'professor's degree', including a full dissertation, is called 'Doctor of Medicine' (*lääketieteen tohtori*).

- *Diplomi-insinööri* is a six-year programme of 300 ECTS, which is comparable to an Anglo-Saxon Master of Science with the Bachelor in the same field. However, included in this is a 30 ECTS 'diploma project', which is a real-life engineering project taking about six months to one year. Its completion demonstrates the professional competence in addition to the necessary amount of education. Notice: this program, in practice, does not interoperate with the polytechnic *insinööri (AMK)* program.

After a Master's degree, there are two further post-graduate degrees — an intermediate postgraduate degree, called Licentiate, and the Doctor (Doctorate) degree. A Licentiate programme has the same amount of theoretical education as a Doctor, but its dissertation work has less requirements. On the other hand, the requirements for a doctoral dissertation are a little bit higher than in other countries.

Adult education

Completing secondary school on a vocational program with full classes on a three year curriculum provides a formal qualification for further studies. However, it may prove necessary to obtain post-secondary education before being admitted to a university, as the entrance examinations require a relatively high level of knowledge. Post-secondary education is provided by municipal schools or independent 'adult education centres', which can give either vocational education or teaching at comprehensive or upper secondary school levels. It is possible to obtain the matriculation diploma, or to better the comprehensive school grades on these courses. A new trade can also be learnt by an adult at an adult education centre (*aikuiskoulutuskeskus*), for example, if the structural change of the economy has made the old trade redundant.

In universities, the Open University (*Avoin yliopisto*) programme enables people without student status to enrol in individual university courses. There are no entry requirements, but there is a modest tuition fee (eg 60 euros per course). Polytechnics have also their own, similar programmes (*Avoin ammattikorkeakoulu*).

Impact of the Bologna Process

Finnish higher education has what is called a dual model, where universities focus on scientific Master's and higher degrees and AMKs mostly on Bachelor-level vocational and practical education. The phrase 'equal but different' was used in conjunction with the dual model, meaning that Finnish AMKs and universities serve different goals in the field of higher education and should not be combined on any level.

There are about 100,000 students in AMKs. The most notable field of education is Engineering, in which high level tuition is offered, starting from a broad base of Mathematics and Physics related to the field of study. Engineers graduating after a minimum of four years and 240 ECTS credits are awarded the degree of *insinööri* (AMK), often compared to the foreign Bachelor of Engineering.

The ongoing Bologna Process has lead to some 'reform' by complementing AMK studies with some theoretical studies, opening the route to higher degrees. The Process has also progressively lowered the amount of required additional studies, blurring the distinction between vocational and academic qualifications. In some fields, new postgraduate degrees have been introduced. Co-operation between the different systems is rising and some integration is occurring under pressure from Government. The aim is to have 60% to 70% of each annual cohort in higher education.

At the same time, in the last few years, cuts in student numbers have occurred, in particular to AMK degrees. In 2007 and 2008, the Ministry of Education is cutting a further 10% of student places in these institutions with the argument that a more academically educated, rather than vocationally trained, workforce is now required. It is still largely undecided whether (and when) some of those cuts could be redistributed to areas in need of more highly educated workers. In 2001 and 2002, 3.7% of university graduates were unemployed whilst for AMK graduates the rate was 8% (OECD, 2005).

Furthermore, an increase in vocational (ie upper secondary) school student places might be preferred to address the widely acknowledged shortage of basic skills in Finland such as plumbing and building.

Another perspective is that AMKs focus on R&D by applying previous knowledge rather than producing new research. It is of note that they have a strong and legislated role in regional development. As such, keeping in mind that there is a mandatory five month practical training for all students whose aim is vocational competence rather than higher scientific education, AMKs might prove to be a better conduit than universities for knowledge transfer purposes: they provide professionals for locally important purposes, and are governed by the city, although they receive most of the funding from the state.

AMKs have been until just recently granting only lower degrees (3 to 4 years) in vocational studies which do not qualify students for further studies at universities. AMK degrees are not considered on the same level as university degrees in the Finnish system. Nevertheless, from a comparative international perspective, they are similar to Bachelor degrees. Recently a higher AMK degree (the equivalent of a Master's) has been introduced for holders of an AMK degree or a Bachelor's degree from a scientifically oriented university, to continue studies alongside working. AMKs do not grant the higher degrees of Licentiate and Doctor, unlike universities.

Since 2006, the term University of Applied Sciences has been universally applied to all Finnish AMKs, which are financially independent from the Ministry of Education. The academic world, including the Finnish Union of University Professors, rejects the term as an attempt of AMKs to disguise themselves as actual universities. The Ministry also continues to refer to the institutions as polytechnics. Universities focus on research, while the main focus of the AMKs is to produce branch-specific professionals for the needs of the labour market. There has even been general concern that if the dual model is scrapped, the result will be 'good' and 'bad' universities which is the Finnish perception of the situation in the UK.

Traditionally, an AMK degree does not qualify the student for further studies, as it is not intended for this purpose. Recently, however, the legislation has been changed. Bachelor's graduates from AMKs cannot enter universities for post-graduate studies leading to Master's degrees with their AMK degrees alone. Although it is not necessary to do a full lower university degree, theoretical studies of 60 ECTS points (about one year) are required.

Since 2005, the Finnish Parliament has approved the creation of a higher AMK degree, similar to Master's in universities. This has led to a small-scale kick-off of new degree programmes in limited fields, for 60 to 90 ECTS credits. These will give similar qualifications to the university Master's degree in some areas of education, although a minimum three years of work experience is needed after a tertiary degree to qualify for an AMK higher degree programme.

Universities

Only universities award licentiates and doctorates. In Finnish (and Swedish) universities, the Licentiate's degree (eg *filosofian lisensiaatti* — Licentiate of Philosophy) is awarded after completion of the coursework required for a doctorate and a dissertation formally equivalent to half of a doctoral dissertation, likened to a MPhil degree in the British system. The licentiate is particularly popular with students already involved in working life where completing a full dissertation while working would be too difficult.

The Licentiate of Engineering (LicEng) is an intermediate postgraduate award and can be seen as an academic step halfway between a Master's and a PhD. On completion, the award is equivalent to 80 academic credits, or nominally two years of full-time work, although as a result of the differences in requirements and individual performance, the time to complete a Licentiate of Engineering degree varies. Normally, it should take around two and a half years, ie half of that of a PhD, if teaching and other departmental responsibilities are included.

Traditionally, only university graduates may obtain higher (postgraduate) degrees. The Bologna Process has resulted in some restructuring, where vocational degree holders can qualify for further studies by doing additional courses. There are 20 universities and 30 polytechnics in the country.

Australia

Structure of the Australian system

The Australian educational system consists of three levels as shown in Figure 6 below, and three main providers: schools, Technical and Further Education (TAFE) Colleges (equivalents to FECs) and universities. Some VET provision is offered via private training providers.
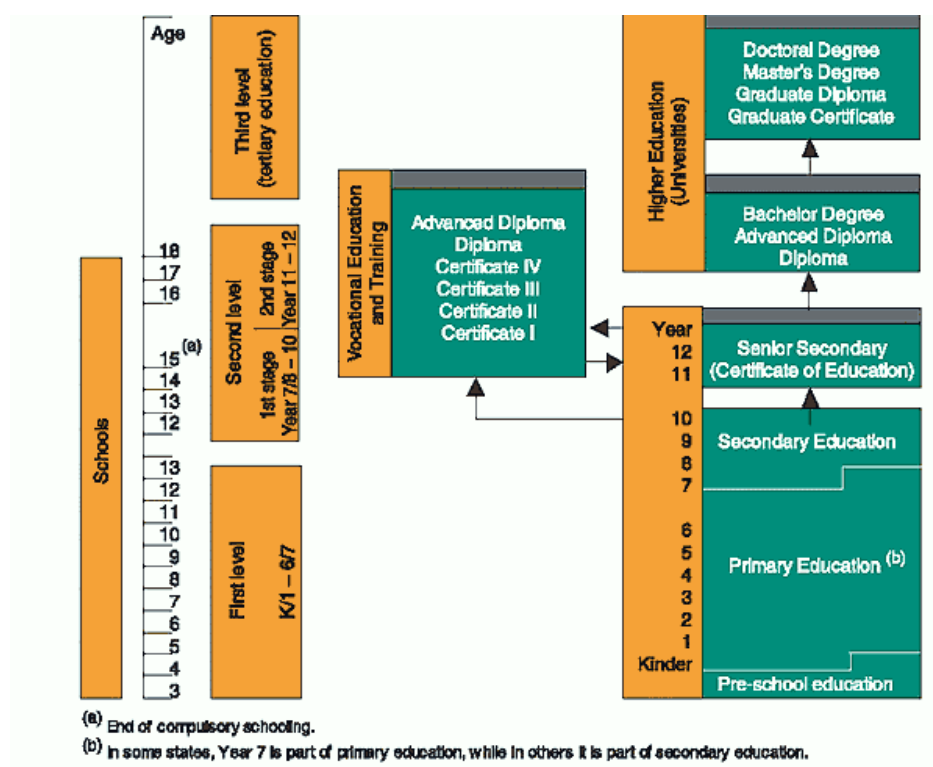

Figure 6: Structure of Australian education system (DEST, 2003)

Primary and secondary schools

Adapted from *Study in Australia* (2007) and *Australian Educational International* (2007, p. 42)

> Schooling in Australia starts with a preparatory year followed by 6 or 7 years of primary and 5 or 6 years of secondary school, depending on the State. There is a national school curriculum framework up to year 10. Until 2007, there were no standardised examination requirements for progression through primary school, and no formal certificates were awarded. Students progress to secondary school on the basis of having completed the final year of primary school and on the recommendations of teachers in consultation with parents. All students are accepted into secondary school without further examinations. However, a special entrance examination may be required for entry to some specialist secondary schools and to some private schools. Although the primary responsibility for assessment of student school performance lies with the States and Territories and individual schools, in 2007, the Australian Government introduced comparative assessment of student performance across the country. As a result, there is now annual,

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nationally comparable reporting of the achievements of Year 3, 5, 7 and 9 students in literacy and numeracy, based on State and Territory tests, against agreed national minimum benchmarks (MCEETYA, 2007). These tests add to the sample testing already being carried out.

States and individual schools have their own assessments. These assessments vary depending on the level of schooling, the subject being assessed, and the policies and practices of each State and Territory. Up to Year 10, assessment is mainly carried out by classroom teachers in each individual school using a variety of assessment methods including projects and assignments based on individual student or group research and investigation, oral presentations, classroom tests, and classroom participation. Assessment may also include school-wide examinations. State-wide or Territory-wide external examinations may also be conducted.

Senior secondary education

Adapted from DEST (2007)

Senior secondary education offers several types of programmes and covers Years 11 and 12. Completion of Year 12 represents 13 years of education in Australia. The relevant State or Territory Senior Secondary Certificate of Education is awarded on successful completion of Year 12 — different names and curricula, which have to be approved at State level, are used for the certificates in each State and Territory. Students planning to continue to higher education at universities undertake these tertiary entrance programmes. Each State and Territory, through its senior secondary education agency, is responsible for determining its assessment policies and supervising the assessment process in Years 11 and 12.

Generally, assessment in upper secondary school is designed to determine the levels of achievement in both the knowledge and understanding of the concepts and principles of the subject matter, and analytical and practical skills in a wide range of situations.

All States and Territories use more than one method of assessment with the most common methods being external examination, moderated school-based assessment, non-moderated school-based assessment and external scaling tests.

External examination requires all students across the State or Territory who are studying the same subject to sit the same examination at the end of the one-year or two-year study period. The major purpose is to rank all students undertaking that subject in the State on a single specified scale. These examinations are conducted by the senior secondary agency.

School-based assessment is undertaken by teachers in the school in accordance with approved syllabuses or accredited course documents. Assessment methods include examinations, tests, analytical exercises, written research reports, essays, laboratory and other applied projects, field studies, portfolios of work, orals, aurals, and observations of performance. School-based assessment usually assesses a broader range of skills and learning outcomes than those assessed by formal written examinations.

Moderation is a process of placing assessments of student achievement by different schools for the one subject on the same scale. Moderation provides comparability of standards within one subject across the State or Territory and removes variations in marks, grades or scores that are not due to student achievement. Non-moderated

school-based assessment is usually still subject to policies and procedures to ensure that the standards and procedures for assessment are carried out as stated in the syllabus or course documents. In some cases, non-moderated assessment may be subjected to some form of moderation within a school.

External Scaling Tests may be based on the State or Territory curriculum or be an assessment of general scholastic ability. They may be used to rank students across the State or Territory, or be used in the calculation of the tertiary entrance score or rank.

Scaling — a mathematical process of putting different sets of marks on a common scale to adjust to the different characteristics of different groups — is used by most States and Territories in their assessment or reporting processes.

Assessment methods have traditionally been based on the norm-referenced approach whereby student achievement is reported by relating a student's performance to the performance of others who have taken the same course in the same year. Many States and Territories are now moving to a standards-referenced approach which reports student achievement of learning outcomes with reference to specified standards of performance. The performance standards are designed to demonstrate the student's level of knowledge and understanding of the concepts of the subject area, to apply critical thinking skills to explain or analyse the concepts and apply them in varying situations, and present evaluations that analyse, extrapolate, interpret or synthesise detail or data. The standards usually include the ability to communicate effectively in the subject area and create new or experimental pieces of work.

The organisation of Australasian Curriculum Assessment and Certification Authorities (ACACA) has developed a common set of *Guidelines for Assessment Quality and Equity.*

Vocational and technical education in schools

Vocational and technical education (VTE) within the senior secondary curriculum, commonly known as *VTE in Schools*, is designed to broaden students' choices by providing alternative pathways to tertiary education and work beyond subjects which predominately lead to university. VTE in schools programmes, including school-based New Apprenticeships, are undertaken alongside regular secondary school subjects as part of studies leading to the relevant State or Territory Senior Secondary Certificate of Education. In addition, they provide credit towards a nationally recognised VTE qualification within the Australian Qualifications Framework (AQF).

The majority of programmes are at AQF Certificate I and II levels. Additional pre-vocational training places in the trades and school-based New Apprenticeships can also be taken in the Australian Technical Colleges. The programmes are delivered in the schools themselves or through local TAFE colleges or other Registered Training Organisations, and local employers and businesses. The courses are developed from training package programmes or are accredited VTE courses. Arrangements differ from State to State as to how VTE courses contribute to the Senior Secondary School Certificate of Education and tertiary entrance scores.

Post-secondary

For students planning to continue to other post-secondary or vocational studies, other study programmes are offered across a range of subject areas. The theoretical level of these subjects is appropriate for completing secondary education but may not be acceptable for admission to university. Students undertaking these subjects develop a general knowledge and understanding of the subject material, as well as skills in Communication, Problem Solving, Investigation, Research, Evaluation and Applied Skills. These subjects are developed by either the senior secondary education authority or by individual schools and accredited or approved by the authority. Around nine out of every ten Australian secondary schools also offer vocational education programmes. Assessment is usually school-based and may be moderated. These subjects are usually appropriate for admission to programmes at the Technical and Further Education (TAFE) colleges and other post-secondary institutions.

Reporting of student achievement

Primary and secondary school report cards

The achievement and progress of students in primary and secondary schools across Australia are reported in many different ways. Reporting of student achievement uses numbers (marks, scores, or percentages), grades and descriptive statements.

From 2006, schools were required to provide parents with student report cards written in plain language that show their child's achievement relative to objective standards and give parents information about their child's achievement relative to the achievement of other students.

Tertiary entrance or admission

Students seeking admission to higher education are provided with a tertiary entrance score or rank, in some cases referred to as a Universities Admission Index, on the basis of their senior secondary education performance. These are used by the higher education authorities for selecting students for admission to specific programmes. Individual universities may also have additional academic requirements for admission to specific programmes. Each State and Territory has its own system for calculating the score or ranked position or index and its own nomenclature, with reviews of the methodology and processes occurring fairly regularly.

Students who wish to apply for entry to higher education institutions in another State or Territory use their home State or Territory scores and do not have to sit a further examination. Tertiary admissions centres convert interstate scores or rankings using a common index which was developed by the Australasian Conference of Tertiary Admissions Centres.

New national training system

Australia's national training system is industry-led, competency-based, nationally consistent and quality assured with recognition that effective national agreements rely on co-operation and collaboration between the Australian, State and Territory governments. The Australian Qualifications Framework (AQF) was established by the Ministerial Council of Education, Employment, Training and Youth Affairs in 1995. The Framework links together qualifications across these three sectors and is a highly visible, quality-assured national system of educational recognition. The AQF vocational and technical education

qualifications focus on competency in a workplace environment. The National Skills Framework provides the basis for high quality, flexible, nationally consistent vocational and technical education. It consists of the Australian Quality Training Framework (AQTF) and nationally endorsed, industry developed training packages.

Registered Training Organisations (RTOs) are responsible for the assessment of competencies or courses and issuing transcripts. Grading systems vary. In theory, where assessment is based on achievement of the competencies set out in a Training Package, each competency is listed with achievement as 'Competent' or 'Not Yet Competent'. A student may not have to undertake a course of study where assessment can be based on Recognition of Prior Learning or Recognition of Current Competencies (RCC). This is usually indicated on the transcript by 'RPL'.

Australian Qualifications Framework

The qualifications offered in the system are best understood in the context of the Australian Qualifications Framework (AQF), which was created in 1995 (see Table 5). The AQF is the only systemic framework that spans post-compulsory education and training in Australia. The AQF has no accreditation or recognition functions, and nor does it have quality assurance functions (Keating, 2000). Rather it designates which qualifications are offered in each sector and the descriptors that accompany each (Australian Qualifications Framework Advisory Board [AQFAB], 2002). It does not prohibit one sector from offering a qualification that is generally offered by the other, provided the sector is able to adhere to the accreditation and other requirements that accompany the issuing of the qualification. Generally, however, institutions do not receive public funding for any qualification they may offer outside their sector.

The AQF has, based on agreement between the key bodies in both sectors, promulgated credit transfer guidelines and has developed recognition of prior learning principles and operational guidelines which are currently progressing through the ministerial endorsement process. However, while these guidelines are valuable, at most they can be regarded as recommendations (particularly for self-accrediting universities) and it remains to be seen whether these initiatives, while important, will contribute to seamlessness.

Schools sector	Vocational Education and Training sector	Higher Education sector
		Doctoral degree
		Master's degree
		Graduate diploma
		Graduate certificate
		Bachelor's degree
	Advanced diploma	Advanced diploma
	Diploma	Diploma
	Certificate IV	
	Certificate III	
Senior Secondary Certificates of Education	Certificate II	
	Certificate I	

Table 5: Australian Qualifications Framework (AQFAB, 2002)

Higher education

There are now 44 self-accrediting higher education institutions in Australia and 40 of these are universities. In addition to these institutions there are over 100 private education providers accredited by State and Territory governments offering higher education courses. The Australian Government's higher education programme is designed to support a diverse and accessible higher education sector of international standing to meet Australia's social and economic needs.

Two grading systems are used for Bachelor's degrees: grading for individual units or subjects, and classifications for Honours degrees.

Individual units or subjects

Institutions use variations of several main types of subject grades: descriptive grades — for example, High Distinction, Distinction, Credit, Pass; letter grades — for example, A to E; and numeric grades — for example, 7 to 1, where 7 is the highest mark. Some institutions may use Honours classifications (see below) for individual subjects, particularly in an Honours course.

Subject grades will often be aligned to a notional percentage mark. Two examples are provided below. Usually the grading system is indicated on the transcript.

High Distinction	85%–100%	80%–100%
Distinction	75%–84%	70%–79%
Credit	65%–74%	60%–69%
Pass	50%–64%	50%–59%

Table 6: Descriptive grades and notional percentage marks

A number of Australian institutions use the **conditional or conceded pass**, but normally only one or two such subject passes would count towards graduation. Most Australian universities do not use a 'cumulative' approach. If a student fails one or more subjects, he or she may not be re-admitted to the degree programme. If he or she continues, the failed subject must be repeated or an equivalent alternative taken in its place. However, graduation is based on completion of the specified subject requirements, and once any deficiency has been made good, the subject is regarded as completed.

Degrees

Ordinary or Pass Bachelor's degrees are normally awarded unclassified. Honours degrees are classified — the classifications can be expressed in a number of ways:

Honours degrees are classified — the classifications can be expressed in a number of ways:

First Class	First Class	First Class	HI*	HI
Second Class (Upper Division)	Second Class Division A	Second Class Division One	HIIA	HII/i
Second Class (Lower Division)	Second Class Division B	Second Class Division Two	HIIB	HII/ii
Third Class			HIII	HIII

* HI — Honours First Class

Table 7: Degree classifications

If the level of the academic achievement is insufficient for Honours, an Honours degree may be awarded in the Pass Class.

Professional Bachelor's degrees with Honours: Many universities vary the above classifications for Honours awarded on merit in professional degrees: Third Class Honours are rarely awarded and Second Class Honours may not be differentiated.

Technical and Further Education

About 80 Technical and Further Education (TAFE) institutes operate on over 300 campuses around Australia, delivering vocational and personal enrichment programs to more than 1.2 million people per year. TAFE infrastructure is estimated to be worth between $6 billion and $7 billion and expenditure on vocational education and training is more than $7 billion per annum. Just over $3 billion is publicly funded, of which the Commonwealth provides about one-third. Overall VET consists of publicly funded institutes of Technical and Further Education (TAFE), private providers, and community based, not-for-profit providers. However, TAFE is the largest component, constituting just over 78% of all enrolments and almost 88% of delivery. The Commonwealth Government uses its 36% share of government funding towards VET provision (with the remainder coming from the states) as a policy lever to drive its reforms. (A national VET system was constituted in 1994, when the Commonwealth and State governments agreed to jointly establish the Australian National Training Authority (ANTA). All VET systems are required, as a result of national agreements, to implement nationally endorsed training packages based on competency-based training. The Australian Quality Training Framework (AQTF) was developed by the National Training Quality Council (NTQC) of the Australian National Training Authority (ANTA) Board in conjunction with States and Territories, the Commonwealth and industry — and endorsed by Ministers for Vocational Education and Training on 8 June 2001. All VET systems are required, as a result of national agreements, to implement nationally endorsed training packages based on competency-based training. These are similar to the Scottish Vocational Qualifications.

The key objective of the AQTF is to provide the basis for a nationally consistent, high quality vocational education and training system. The standards of the AQTF are in two parts: 'Standards for Registered Training Organisations'; and 'Standards for State and Territory Registering/Course Accrediting Bodies'.

Field A	extended written expression involving complex analysis and synthesis
Field B	short written communication, reading comprehension
Field C	basic numeracy, calculations, graphical and tabular interpretation
Field D	solving complex mathematical problems
Field E	substantial practical performance involving physical or creative/expressive skills

Table 8: ATQF standards

Queensland

Adapted from Australian Educational International (2007)

We have included this section on Queensland as it provides an example of the many different opportunities for the education provision of States and Territories to differ from each other.

Sector	Name/Years	Qualification	Awarding Body
Preschool			
Preparatory	Preschool (until 2006) Preparatory (from 2007)		
Primary	Years 1–7		
Secondary	Years 8–10	Year 10 Certificate	Individual schools
Senior Secondary	Years 11–12	Senior Certificate (until 2007) Queensland Certificate of Education (QCE) (from 2008)	Queensland Studies Authority (QSA) Queensland Studies Authority (QSA)

Table 9: Educational provision in Queensland

Awards and Records of Achievement

The Year 10 Certificate — known as the Junior Certificate until 1995 — is issued by each individual school. The curriculum is developed from syllabuses approved by the Queensland School Curriculum Council.

The Senior Certificate is awarded at the end of Year 12. There are three types of Senior Certificate subjects. Authority subjects are developed by the Queensland Studies Authority (QSA). Results may be used for the calculation of overall positions and field positions. Authority-registered subjects are developed by the QSA or are developed by individual schools and accredited by the QSA. Recorded subjects are subjects, other than an Authority subject or Authority-registered subject, offered by an educational institution approved by the QSA, the results of which are recorded on the QSA's Senior Certificates. The QSA's procedures for the moderation of standards of achievement do not apply to results in these subjects.

Authority-registered subjects and Recorded subjects may contribute to entry schedules for admission to university. Authority and Authority-registered subjects require a

minimum of 55 hours per semester of timetabled school time. The hours for Recorded subjects vary depending on the subject and the external agency.

Schools that are Registered Training Organisations (RTOs) may deliver VTE certificates from training packages endorsed under the National Training Framework.

The Senior Certificate records results in one or more subjects — Authority, Authority-registered and Recorded subjects — as well as results in the Queensland Core Skills (QCS) Test. The Senior Certificate also records any VTE certificates and/or units of competency attained. On completion of Year 12, a student receives a Student Education Profile. This comprises a Senior Certificate and a Tertiary Entrance Statement if the student is eligible for one. If a student leaves school at the end of Year 11, an Exit Statement is provided. Students on highly individualised learning programmes may be eligible for the Certificate of Post-Compulsory School Education. Statements are subject to guidelines and quality processes defined by the QSA. There are three sections comprising statement of achievement, vocational and technical education and statement of participation.

In 2008, the Senior Certificate was replaced by the Queensland Certificate of Education (QCE). The QCE, which was introduced from 2006, is designed to recognise the diversity of young people and their varied post-school aspirations. It is an achievement-based qualification with the flexibility to allow more learning options, more places where learning can occur, and more time to complete the Senior Phase of learning.

Assessment

Assessment for Years 1 to 10 is school-based, derived from Years 1 to 10 syllabuses approved or accredited by the QSA. Assessment for the Senior Certificate is school-based in accordance with work programmes (Authority subjects) or study plans (Authority-registered subjects) approved by the QSA. Assessments of Authority subjects are externally moderated using procedures managed by the QSA. Results for Authority-registered subjects and Recorded subjects are not moderated.

The Queensland Core Skills (QCS) Test was introduced in 1992. It is a cross-curriculum test that is grounded in the Queensland senior curriculum. The QCS Test examines the common elements of the senior curriculum, including evaluating, synthesising, analysing, expounding a viewpoint, graphing, compiling statistics, and calculating, by employing three modes of response — extended writing, short response, and multiple choice.

Grading systems

Authority and Authority-registered subjects are graded into five levels of achievement, which indicate the standards attained in relation to the criteria stated in the school's approved work programmes, based on the syllabus for the subject.

The levels are:

Band 1	Approximately 2% of the student cohort
Bands 2–6	Approximately 15% of the student cohort
Bands 7–21	Approximately 70% of the student cohort
Bands 22–24	Approximately 11% of the student cohort
Band 25	Approximately 2% of the student cohort

Table 10: Authority-registered grading levels

The criteria used in making the final judgement of the level of achievement include the student's knowledge and understanding of the concepts and principles of the subject and the student's cognitive and practical skills in a wide range of situations. These are defined in the subject syllabus. Assessment in the Queensland Core Skills Test is reported as a grade from A (highest) to E (lowest).

Tertiary entrance

Tertiary admission in Queensland is administered by the Queensland Tertiary Admissions Centre (QTAC). For eligible students, the Student Education Profile includes a Tertiary Entrance Statement (TES), which reports a student's Overall Position (OP), and up to five Field Positions (FP).

The Overall Position (OP) indicates a student's rank order position based on overall achievements in Authority subjects. To be eligible for an OP, students are required to have studied at least 20 semester units of Authority subjects, three having been studied for four semesters each, and to have sat the QCS Test. The OP uses equal weightings for all subjects and is scaled using QCS Test results. The OP of a student's rank order position is reported as being in one of 25 bands from Band 1 which is the highest down to Band 25 which is the lowest. They are the same as for the Authority and Authority-registered subjects (Table 10).

Field Positions (FPs) indicate a student's rank order position based on overall achievements in Authority subjects in up to five fields. They are calculated only when students are eligible for an OP and use variable weightings for subjects, scaled using QCS Test results. FPs provide information on how a student has performed in Authority subjects which emphasise the skills within the definition of that field. On average, students are eligible for three fields depending on a student's subject choices.

Field Positions are reported as Bands from Band 1 which is the highest down to Band 10 which is the lowest. There are five fields covering Literacy, Numeracy and Performance Skills, just as in the ATQF standards (Table 8).

Australia-wide grading and assessment concerns

Cumming and Maxwell (2004) identify ten common themes concerning assessment practice in Australian education across the six states and two territories. The themes are:

♦ a strong curriculum base influencing assessment
♦ the incorporation of school-based assessment in all certification
♦ preference for standards-referenced assessment
♦ respect for teacher judgement
♦ increasing vocational education delivery within schooling
♦ multiple pathways to future study and careers
♦ school-based assessment in the compulsory years of schooling
♦ moves towards outcomes-based frameworks
♦ issues relating to national benchmark data
♦ equity issues

Some of these areas of discussion are covered in the sections which follow.

When the State, Territory and Australian Government Ministers of Education met as the 10th Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) in Adelaide in 1999, they agreed on a set of national goals known as the Adelaide Declaration. A key focus of the amalgamation which is MCEETYA, is quality assurance and accountability and so it is not surprising that it also agreed that the achievement of the goals entailed 'a commitment to collaboration' for the purposes of, inter alia:

> 'continuing to develop curriculum and related systems of assessment, accreditation and credentialing that promote quality and are nationally recognised and valued' and 'increasing public confidence in school education through explicit and defensible standards that guide improvement in students' levels of educational achievement and through which the effectiveness, efficiency and equity of schooling can be measured and evaluated.'

National testing for literacy and numeracy

The Australian education system is under the same accountability pressures as countries such as the UK, with this being perceived as being the prime function of assessment (Brindley, 2001). Brindley suggests that the implementation of outcomes-based assessment and reporting systems in educational programs has been accompanied by a range of political and technical problems, including tensions between the summative and formative purposes of assessment and doubts surrounding the validity and reliability of teacher-constructed assessment tasks. One example he cites is that some learner groups may be disadvantaged by the practice of reporting aggregate outcomes in terms of minimum standards. He suggests that problems of consistency and comparability that have been identified by research can be addressed through the development of fully-piloted task banks and the provision of appropriate forms of professional development. He emphasises that 'greater attention needs to be given to the role of the teacher if outcomes-based assessments are to provide high quality information'.

School assessment, grading and reporting

As noted above, from 2006, schools are required to provide parents with student report cards written in plain language that show their child's achievement relative to objective

standards and give parents information about their child's achievement relative to the achievement of other students.

Earlier, Cuttance and Stokes (2000) had reported on the needs and expectations of parents and the wider community for information on school programmes, student progress and school performance. The project reviewed the relevant national and international literature, surveyed the policies and practices of Australian education systems, and met with Australian parents to ascertain their experiences, views and expectations.

They derived statements of best practice from what parents indicated they required in the nature of information provision about school and student achievement. The following, which represent just a sample of statements, are relevant in the light of the issues raised elsewhere in this report, on the issues which arise when trying to devise grading systems which work with formative assessment and, at the same time relieve the pressure to record and report simply for summative and accountability purposes. Parents did want schools to report to them the standard of achievement their children had reached. At the same time, they wanted the reports to provide interpretative comments about the progress and achievements of their child, to describe achievement in both academic and non-academic areas, and to be presented in a format and language that is readily understood by parents.

Valid, reliable and quantifiable assessment information

Moon et al (2005) note that, on a national level, Australians have a history for demanding that assessments provide quantifiable information about student learning that is both reliable and valid. But they also note that as a nation, there has been a failure to work 'with teachers to develop classroom assessments that provide high-quality information about student learning so that the instructional process is better informed. To date, guidelines with psychometric standards for classroom assessments where teachers make judgements about student learning do not exist'. They reviewed the literature and found no studies on the reliability of classroom assessments. They found that 'in general the interrater reliability coefficients were similar to those found in studies on classroom observations of student performance. In general, the Kappa coefficients ranged from 0.55 to 0.95, indicating that ratings between two independent raters were fairly consistent with one another, despite the lack of training.' They concluded that the results of their study begin to provide evidence that differentiated authentic assessments for classroom purposes can be developed to provide consistent information about student learning. They also concluded that the results suggest these assessments can be used in middle school classrooms to assess students' obtainment of academic learning standards. Coming to similar conclusions as Harlen (2005) they suggest that 'particularly in high-stakes accountability environments', the focus of classroom instruction is on test preparation rather than helping students gain understanding through the construction of their own knowledge whereas 'with proper development and implementation, teachers can successfully use differentiated authentic assessments… to measure academic standards identified for the content areas'.

Year 12 curriculum content and achievement standards

There has been concern in Australia about the inconsistencies in content and quality of the 'senior school certificate' taken at the end of secondary school. In May 2006, the Australian Government commissioned the Australian Council for Educational Research (ACER) to analyse and report on the content, curriculum and standards in Year 12 English (including Literature), Mathematics, Physics and Chemistry and Australian History. Matters and Masters (2007) concluded that the issue is not about school or teaching standards in

different states, local authorities and schools. Rather, it was the lack of 'clear statements of core curriculum content and nationwide standards from central government'. Also needed were 'clear achievement standards which allow for different methods of assessment, but which provide comparable student results' (p106) for senior curricula which still would be independently developed and managed across the States and Territories.

Vocational education and training in schools

Ryan (2002) notes that the pressure for schools to adopt a more vocationally oriented approach to the education of young people is by no means a new theme. He argues that, whilst there may be the usual economic explanations for interest in the theme, all innovations under the VET in Schools rubric are not equally valuable and that in event 'many observers doubt the strength of the relationship posited between vocational preparation and economic performance, arguing that early vocational preparation goes largely to waste' (Ryan 1999). Instead: 'programs and policies which depart from the traditional educative role of schools in favour of an unduly narrow concept of 'training' or work-relevance are likely to be self-defeating; that work itself may be a rich source of student learning and development'. Finally, he suggests that VET in Schools initiatives are too frequently an evasion of a pressing need for more deep-seated reform of schools and schooling. The problem is the tension between the value assigned to general education and the acquisition of specific vocational competence by both schools and segments of the school population. Careful attention to international experience and research would provide a sound basis on which to re-appraise approaches to VET in Schools. It would provide the basis on which to renovate the senior secondary curriculum so that a vocational dimension, and the experience of learning from work, could be an entitlement of all students. They would be assessed and recognised by high value educational qualifications that would serve multiple purposes and users, including university entrance. This certainly includes appropriate assessment practices which are as suited to the academically talented as to those with vocational interests (Ryan citing Stern 1999). In Australia, Ryan (2002) writes that there was evidence of grading and assessment difficulties created by the Australian VET system's version of competency-based training (CBT) for articulation of vocational with general education.

Competency-based assessment grading

Throughout an evaluation carried out by NCVER (the National Centre for Vocational Education Research) and Australia's principal provider of vocational education and training (VET) research and statistics, the issue of grading was one of four issues consistently raised as causing concern, particularly from the surveys carried out with the Industry Training Advisory Boards (ITABs)/Industry and Registered Training Organisations (RTOs). The major challenge facing respondents was the need for strategies to bridge the gap between competence and excellence. Many employers said that grading provided them with a way to define strengths and weaknesses of their employees/learners. They said they needed more than an award of 'competent' or 'not yet competent' when making staff selections and placements. Learners saw CBA as not recognising additional effort. Although CBA removed the fear of failure for lower achievers, learners felt that it often ignored the efforts of higher achievers. Many learners, ITABs and teachers, trainers and assessors considered graded assessment as a way to motivate employees/learners. A number of respondents suggested that percentage marks did not have to be used in grading CBA. Rather, they were interested in exploring other ways to measure and report levels of performance.

Higher education assessment issues

Wheelahan (2000 and 2005) has written extensively on the relationship between TAFE and HE, and provides a very useful picture of a range of issues that pertain to collaboration. Of particular interest in this context are the dual sector universities which combine TAFE and university study in one organisational setting. Five dual sector universities exist in Australia, four in the state of Victoria. She has also commented that there exist a number of obstacles to collaboration between single sector TAFE and higher education institutions, and between the sectors at dual sector universities, including:

♦ competition between the sectors for students, particularly in areas where participation rates are relatively low and levels of demand quite weak
♦ incompatible assessment procedures in both sectors that are derived from the different curriculum models in each
♦ the ungraded assessment of VET/TAFE courses disadvantages TAFE students seeking entry to Higher Education courses on the basis of competitive entry
♦ the tightly centralised model of profile negotiation in the VET sector, which limits the freedom of TAFE to move load and collaborate with Higher Education
♦ the different cultures in each sector, the mutual suspicion by each of the other, which is often driven by the different industrial awards and conditions in each sector, and the status differential between TAFE and higher education (Wheelahan 2000)

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