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Asia-Pacific
Secondary Education System Review Series

Examination Systems



Asia-Pacific
Secondary Education System Review Series No. 1

Examination Systems

Peter Hill

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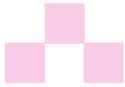
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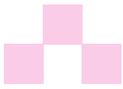
Preface to the Series

The past decade has seen rapid progress towards universal primary education. As more children complete primary school, secondary education has received added attention from governments and development partners. With the expansion of secondary education, new challenges emerge, such as accommodating a greater diversity of aptitudes and societal needs and mobilizing the resources to fund additional infrastructure and teachers. The demand for quality secondary education is compelling governments to undertake thorough assessments of their secondary education systems. However, this exercise poses a challenge in many countries due to the lack of policy research available on secondary education.

In response to the needs of governments in the region, the *Asia-Pacific Secondary Education System Review Series* has been developed to facilitate reviews of the secondary education subsector. It is part of UNESCO Bangkok's ongoing regional project on Secondary Education Policy Research in Asia (SEPRIA).

The booklets in the series provide practice-oriented guidance to education policy planners and managers, offering readers (a) an overview and analysis of major issues in secondary education across the Asia-Pacific region, (b) a choice of approaches to address issues, based on experiences of countries in the region, and (c) a set of guiding questions and a checklist of key issues to consider when preparing a subsector review and reform. Each booklet focuses on a specific topic that deserves careful attention when countries evaluate their secondary education systems.

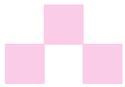
The booklets are made freely available for download from UNESCO Bangkok SEPRIA's website (www.unescobkk.org/sepra). Printed copies are available upon request. The project is coordinated by the Education Policy and Reform (EPR) unit, UNESCO Bangkok, and receives a generous financial contribution from the Government of Japan.



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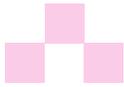
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List of Abbreviations

CEE	College Entrance Examinations
CSAT	College Scholastic Ability Test
GCE	General Certificate of Education
GCSE	General Certificate of Secondary Education
IC	Integrated Circuit
ICAC	Independent Commission Against Corruption
NSAT	National Secondary Achievement Test
NSW	New South Wales (Australia)
PISA	Programme for International Student Assessment
PLA	People's Liberation Army
QCA	Qualifications and Curriculum Authority
SAT	Scholastic Aptitude Test
UNT	Uniform National Testing
USAID	United States Agency for International Development



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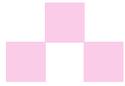
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Also to be acknowledged are those colleagues in UNESCO country and cluster offices in the region, who helped verify country information.

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Foreword

The great emphasis placed on examinations by students, parents, teachers and communities is prevalent in education systems around the world including the Asia-Pacific region. With the rapid growth in primary education enrolment and improvements in retention and transition rates, the demand for secondary education is on the rise. In response, governments across the region use examinations as gatekeepers of access to schooling, indicators of learning outcomes, and as a means of quality control.

Furthermore, examinations are important at the secondary education level because it is a key transformational phase in the education system. Secondary school not only prepares students for higher education, but also equips them for the world of work and life in general. Undeniably, public examinations at this level exert a powerful influence over the lives of students and their future. As a consequence, examinations have been the focus of much policy debate. The debate includes the negative consequences of examinations, catering for a more diverse candidature, assessing a wider range of curricular outcomes, and ensuring the integrity of assessment processes and the accuracy of results.

Asia-Pacific Secondary Education System Review Series No. 1: Examination Systems presents different approaches to examinations at the secondary level and highlights key considerations and challenges associated with existing examination systems. This booklet looks at public examinations that focus on individual students, certifying their level of achievement and determining who shall proceed to the next educational level. As policy debates vary from country to country, rather than attempting to provide an in-depth analysis of examination systems, this booklet serves as a starting point for understanding the regional examination landscape.

It is hoped that this booklet will provide a framework for policy makers and educators to think critically about their own examination systems; and guide them in reviewing and undertaking successful reforms.

Gwang-Jo Kim
Director
UNESCO Bangkok



Section 1:

Introduction

Examinations play a crucial role in shaping what happens in secondary schools and societies within the Asia-Pacific region. This booklet reviews the salient features of examinations in different countries and reviews current practices, focusing specifically on public examinations organized at the national or state level. It also makes suggestions about what can be done to improve examination systems, taking into account best practice both within the region and worldwide.

The enormous influence of examinations within the Asia-Pacific can be properly understood only with some appreciation of the underlying history. They have their origins within the region, being ‘invented’ by the Chinese centuries, if not millennia ago. As far back as the Han Dynasty (BC 206/AD 220), selection to the bureaucracy was on the basis of national examinations.¹ These were very long and demanding exams requiring years of preparation and study. Competition was fierce and some candidates spent a lifetime trying to pass them and to secure, what remains to this day in the Orient, a coveted goal – a position in the senior ranks of the civil service. In modern-day Nanjing, one can visit the remains of the Jiangnan Gongyuan Imperial Examination Centre. First built in 1169, it became the largest imperial civil examination centre in the Ming-Qing period (1368 – 1912) with 20,644 cells or small rooms for examinees. This was assessment on a scale that is impressive even by today’s standards.

China’s examination system was copied at a very early stage by the Japanese, Koreans, and Vietnamese; and as a consequence, examinations have been entrenched in those countries for over a thousand years. The concept was unknown in the West until the eighteenth century, when the Chinese system was described in letters written home by Jesuit missionaries. Examinations were subsequently advocated by thinkers such as Adam Smith and Voltaire, as a means of moving society

¹ See, for example, Ingulsrud, J. E. 1994. An entrance test to Japanese universities: social and historical context. C. Hill and K. Parry (eds), *From Testing to Assessment: English as an International Language*. New York, Longman, pp. 61-81.

from an aristocratic to a meritocratic basis, for regulating access to the professions and for opening up opportunities for people in all strata of society. The practice did not catch on in the West until the nineteenth century, with examinations first being introduced for entry into the civil service, but later for selection to and assessment in schools and universities.

Today, in Europe at the secondary level, subject-based examinations prevail. These typically include a significant proportion of open-ended, subjective questions requiring extended written responses (especially essays), as exemplified by the British 'General Certificate of Secondary Education (GCSE)' and 'A-Level' examinations, the French 'Baccalaureate', and the German and Finnish 'Abitur'.

In the USA, large-scale educational assessment had its origins not in the context of recruitment to the civil service, but to the military. In World War I, some 1.9 million men were tested on the Army Alpha test of intelligence for 'literate', and the Army Beta test of intelligence for illiterates and non-English speakers, especially new immigrants (Wigdor and Green, 1991). These were objectively scored aptitude tests based on the new science of psychometrics and relying on multiple-choice formats that allowed fast and efficient testing of large numbers of SAT evolved in the 1920s out of the Army IQ tests. Modern-day school graduation tests build on the same assessment technology. Assessment at the secondary school level has been dominated by the use of objectively-scored tests, with aptitude testing being the primary means of controlling access to higher education. However, in recent years there has been a new interest in subject-based examinations, as indicated by the growth in enrolments in SAT subject Tests and Advanced Placement exams.

Curiously, although examinations originated in Asia, most secondary school examination systems within the Asia-Pacific are modelled on European, and to a lesser extent, North American patterns. This reflects colonial histories that have exerted an influence that has persisted since the colonial powers withdrew. But it also reflects a very long and entrenched commitment to the notion of examinations, particularly in those countries which historically have fallen within the Chinese sphere of influence. As economies globally have become more knowledge-based and education more critical, examinations at the

secondary level have become increasingly significant as the means to regulate access to the best schools and to the best universities. In fact, so high are the stakes for individuals and so powerful their grip on the minds of millions, that examinations can be said to dominate thinking about the purpose and nature of secondary schooling. They exert both positive and negative influences on teaching and learning and can represent either a limiting constraint or an opportunity to lever change in efforts to introduce educational reforms and to improve educational outcomes.

Section 2:

Examinations in the Asia-Pacific Region

Examinations in secondary schools serve three main purposes.² The first is a *selection* function and entails controlling access to secondary schools, courses within schools and entry to higher education institutions. The second is a *certifying* function and entails finding out and reporting what a student has achieved, whether they have graduated and what they know and are able to do. In addition, systems often make use of examination results for *accountability* purposes and in particular for evaluating the effectiveness of instruction, for motivating students and teachers to perform well, and for reviewing the effectiveness of schools. Many examinations within the countries considered in this booklet are required to serve all three purposes.

Basic information about examination systems within the Asia-Pacific region is summarized in Annex 1. Within the region, there are several patterns of provision. Historically, the most common arrangement has involved three examinations, as shown here:



The first examination is typically taken at the end of primary school for the purpose of controlling access to secondary schools and particularly to more selective secondary schools. It is generally limited in curriculum coverage, involving just languages and mathematics. It may even be a curriculum-independent aptitude or ability test. The second is typically taken at the end of lower secondary education. Students opt to sit for a number of subjects from a fairly comprehensive list, reflecting the

² For a discussion of purposes served by examinations in the region, see Eckstein, M. A. and Noah, H. J. 1993. *Secondary School Examinations: International Perspectives on Policies and Practices*. New Haven/London, Yale University Press; and Eckstein, M. A. and Noah, H. J. (eds). 1992. *Examinations: Comparative and International Studies*. Oxford/New York, Pergamon Press; and Kellaghan, T. 2004. *Public Examinations, National and International Assessments and Educational Policy*. Unpublished paper.

curriculum of the lower secondary school. This second examination serves as an attainment test for those completing junior secondary education and may be used for purposes of entry into work for those leaving school. However, its main function is generally to control access to an upper secondary or 'sixth form' education. The third examination on a limited number of subjects, taken at the end of a two or three year course of study at upper secondary school, serves as an attainment test for those completing upper secondary education and for selection into higher education or recruitment into the workplace.

This pattern, of course, reflects the traditional British model of 11+ exams (end of primary), followed by General Certificate of Education (GCE) 'O' Level or GCSE exams (end of lower secondary), followed by GCE 'A' Level exams (end of upper secondary). This is still the pattern followed in many Asia-Pacific countries, including Brunei Darussalam, Fiji, Indonesia, Iran (Islamic Republic of), Mongolia, Singapore and Sri Lanka.

Just as the 11+ examinations were discontinued in the UK with the introduction of comprehensive secondary education, many Asia-Pacific countries have also discontinued the first of these examinations while retaining the second and third. Such countries include Australia (state of New South Wales or NSW), Bangladesh, India, and Pakistan. Hong Kong SAR³ still conducts testing for secondary school placement purposes, but uses a fairly complex process of statistically moderated primary school assessments, with a special aptitude test to 'moderate' the school assessments.

In yet other countries, the second or lower secondary examination has also been discontinued as upper secondary education has become available to all. Examples include Australia (all states except NSW) and New Zealand, with Hong Kong SAR having announced that it will discontinue its second examination after 2011. One system, Australia (Queensland) has discontinued the third or senior secondary examination as well, in favour of school-based assessment of students' performance in various subjects. Entry to higher education is controlled through the use of schools' assessments that are statistically moderated using scores on a general ability test taken by the students.

³ In this study, Hong Kong Special Administrative Region (SAR) of China is referred to as Hong Kong SAR.

Then there is a group of countries that adopt a different model, including China, Kazakhstan, Kyrgyzstan, Japan, Philippines and South Korea⁴. In each of them, the key examination is the university entrance examination. In China, the National Higher Entrance Examination is taken by students at the end of Grade 12. All sit for Chinese language, mathematics and a foreign language (usually English) and typically select one to three other subjects from around six options, three from the sciences and three from the social sciences.

In Japan, the university entrance examination is perhaps the most significant examination for students, although there is no standardized examination that all those enrolled in secondary schooling have to take, strictly speaking. Prospective students for public universities and some private universities need to sit for the National Center Tests for University Admissions, while many other private universities administer their own entrance examinations. The National Center Tests consist of separate tests for each subject, and each is comprised of multiple-choice. At the end of lower secondary education, students generally take high school entrance examinations standardized not at the national level, but at the prefectural level, in order to gain access to public high schools. Private high schools have their own entrance examinations.

The education systems of Kazakhstan and Kyrgyzstan are modelled on that of the former Soviet Union, but their examination systems have been subject to other influences, especially American influences, since they gained independence. Since 2004 in Kazakhstan, there has been a scheme of uniform national testing (UNT) of students leaving general schools (end of Grade 11) with students taking five subjects: Kazakh, Russian, mathematics, Kazakh history and one optional subject. In Kyrgyzstan, Grade 11 students sit for the National Scholarship Test, which is closely modelled on the US Scholastic Aptitude Test (SAT), and is developed by the Center for Educational Assessment and Teaching Methods, a non-governmental educational organization largely funded by the United States Agency for International Development (USAID).

In South Korea, the critical examination is the College Scholastic Ability Test (CSAT). However, other factors can affect the overall admissions decision, such as students' high school records.

⁴ In this study, the Republic of Korea is referred to as South Korea.

In South Korea, there are three types of important examinations, which are the College Scholastic Ability Test (CSAT), the National English Ability Test (NEAT), and the National Assessment of Educational Achievement (NAEA).

The College Scholastic Ability Test (CSAT) is taken by all students of Grade 12 as one of the critical factors for the admission decision. It has evolved since its introduction in 1993 because of changes in curricula and social demands. Each subject is calculated in terms of standard scores and the number of elective subjects has been reduced. Recently, with the expansion of the admission officer system and early admissions, the CSAT aims to lessen its significance and pressure on students. For the 2014 CSAT, students will select the appropriate levels for Korean Language, Mathematics, and English as a Foreign Language, depending on their intended major at college.

Another important examination in South Korea is the National Assessment of Educational Achievement (NAEA), which is not a certification exam for graduation or an entrance exam for the next level of schools, while the most examinations in the Asia-Pacific region are. The NAEA is the accountability test that requires schools' responsibility for students' academic proficiency and monitors the quality of education to ensure and improve schools' and students' performances.

The purpose of the NAEA is to evaluate how many students achieve the goal of national curriculum and to track yearly academic progress of schools. Also, the results of the NAEA are used as fundamental information to identify the current education status, to investigate the problems of curriculum, and to make education policies and funding decisions for reform school. In 2012, the NAEA had been administered to population of students in grade 6, grade 9 and grade 11 in the end of June that was the middle of school year with five subjects for grade 6 and grade 9 (Korean, Mathematics, Sciences, Social Studies and English) and three subjects for grade 11 (Korean, Mathematics and English).

NEAT is a nationally developed English ability test, measuring four skills of English including reading, listening, speaking and writing. There are two level options for examinees to choose from, levels 2 or 3, depending on the purpose of its use (academic or practical). NEAT is an internet-based test (IBT), and its development, conduct, and administration are processed on the cloud-system called Virtual Desktop Infrastructure

(VDI). Every examinee receives maximum two test opportunities per year, and the schedules are published according to the annual test administration plan. As of June, 2012, five hundred NEAT testing centers are established, and the Ministry of Education plans to expand the number to 1,700 by 2013. The scores are given in four levels (A, B, C, D) on each section, with the performance level description that explains the examinee's language knowledge and ability at each level. The report can be found and printed at the NEAT web-site (www.neat.re.kr), and examinees are encouraged to submit the report to the post-secondary institutions that require the score.

As we have seen, while some examinations at the end of upper secondary test what students have learned (China, Japan and Kazakhstan, South Korea), others are standard aptitude tests that measure general cognitive abilities (Kyrgyzstan), which is also commonly utilized for admittance to university.

Finally, in the Philippines, whose secondary education is largely based on the American schooling system, secondary students used to sit for the National Secondary Achievement Test (NSAT), which was modelled on the American SAT, but this examination has been phased out. As of 2009, there is no government-sponsored examination for entry to higher education. All schools, public or private, administer their own College Entrance Examinations (CEE).

Throughout the Asia-Pacific region, examinations are the chief means for controlling access to the next level of schooling, to the most prestigious schools, to good jobs, to universities, and to greater life opportunities. In other words, because they have enormous consequences for students and their families, getting good results is of paramount importance. Because of their high-stakes nature, examination systems throughout the region are vulnerable to a number of problems including cheating, corruption and anti-educational practices such as excessive drilling and commercial tutoring. These problems can be expected to abate somewhat as access to higher levels of schooling and to higher education improve and examination systems become more robust.

However, increased educational opportunities at all levels place demands on examination systems to cater for a more diverse candidature and to assess a wider range of curricular outcomes. As will be elaborated in the following section, in many nations, reform

of the examination system has been adopted as a powerful lever for bringing about curriculum reform and for promoting new approaches to teaching and learning.

Because of their high-stakes consequences, examination systems everywhere are under great pressure to ensure integrity of processes and accuracy of results. These are matters that are closely scrutinized by the public, the media and government watchdog agencies. Whereas in the past, examination boards may have enjoyed unquestioned authority, this is now challenged and there is a public expectation of transparency of processes and the right to appeal results. This makes it necessary for all examination systems to institute well documented and defensible policies, and to implement quality assurance processes that minimize errors and lead to continuous improvements.

Section 3:

Improvement Strategies

How can examination systems in the Asia-Pacific region respond to these pressures and challenges? This section offers suggestions for how this might be done, drawing on experience both within the region and globally.

3.1 Assuring integrity of assessments

Cheating by students is a universal problem and one that all examination systems have to contend with. But in some countries of the region, serious threats to the integrity of the entire system persist as a result of corrupt or unprofessional behaviour on the part of teachers, principals, examiners and examination officials. Examples commonly cited in the media and on the web include leaking or sale of examination questions, providing students with hints and answers, and turning a blind eye to cheating during examinations.

Initially these kinds of misdeeds may require tough measures to curb them. In Beijing, China, video cameras have been installed in all classes in schools, in part to deter and detect violations of examination protocols. Exam setters are 'locked up' in a secure hotel while they are preparing examination questions and until the examination has taken place. Police cadets are used to process examination papers, and the People's Liberation Army (PLA) guards examination centers.

Once the problem has been brought under control, other formal, ongoing processes are appropriate. For example, Hong Kong's Independent Commission Against Corruption (ICAC) takes a special interest in pursuing any complaints or accusations regarding examination security and integrity. It works closely with the examinations authority to ensure that a proactive approach to prevention is taken.

Examination authorities need to be vigilant and unrelenting in following up all suspected cases of malpractice. They must have the backing of regulations and legislation to enable them to take appropriate action. This includes immediate action by law enforcement bodies and the capacity to impose penalties on offenders. The establishment of a

committee including senior lawyers to review cases, recommend action, and review policies, together with transparent and easy-to-access complaints mechanisms, can assist in assuring the integrity of examinations systems.

3.2 Reducing examination pressures

A feature of all examinations that have high-stakes consequences for those taking them is that they tend to generate negative ‘backwash’ effects.⁵ Students are continuously preparing for examinations; students and parents remain in a state of high anxiety; and the pressure on students to do well can lead to tragic consequences in extreme cases. There is also a tendency for schools and teachers to focus on the examination and to ignore aspects of the curriculum that are not tested directly and that do not contribute to better examination results, such as extended writing, project work, oral communication, and so on.

As noted, these pressures are closely linked to securing a place in the best schools and colleges. Pressures abate somewhat as universal access to a full secondary education is achieved and when the majority of applicants are able to enrol in their preferred courses in higher education. This has been accomplished by Australia and New Zealand. In both, the number of examinations has been reduced. For example, in no Australian state are examinations held for controlling access to secondary schools. Further, in all states with the exception of New South Wales, the examination at the end of lower secondary education has been discontinued. In Queensland, subject-based examinations at the end of upper secondary were discontinued many years ago in favour of school-based assessments, with the scores of applicants for higher education moderated against results on a core skills test.

The introduction of moderated school-based assessments constitutes one strategy for reducing examination pressures.⁶ School-based assessments are conducted by schools, often within strict central

⁵ For a review of the evidence of the impacts see especially Mehrens, W. A. 1998. Consequences of assessment: What is the impact? *Educational Policy Analysis Archives*, Vol. 6, No. 13, pp. 1-24; and Bachman, L. F. and Palmer, A. S. 1996. *Language Testing in Practice*. Oxford, U.K., Oxford University Press.

⁶ For a review, see Wyatt-Smith, C. and Matters, G. 2008. *Realising and Releasing Potential: Externally Moderated School-Based Assessment 40 Years On*. Cambridge, International Association for Educational Assessment (IAEA).

guidelines regarding the nature of the assessment task, how it will be completed and supervised, and how it will be marked.⁷ To ensure consistency of standards, examination authorities put in place 'moderation' processes to review and where necessary, adjust the marks submitted for school-based assessments. Systems that adopt school-based assessments, typically calculate a student's total score by combining examination results and school-based assessment scores in fixed proportions (e.g. 70 percent exam + 30 percent school-based assessment). Because students' total scores are only partly dependent on their examination results, the examinations are no longer such a stressful, 'all or nothing' event.

This argument has been cited to justify school-based assessment reforms in countries such as Australia, Hong Kong SAR of China, New Zealand and South Korea and in reforms proposed in China. Most of the examination boards, however, have embraced moderated school-based assessments not just to reduce examination pressures, but more importantly to improve the reliability and validity of assessments, which is something that will be discussed later on.

Other ways of reducing examination pressures include allowing re-sits (i.e. the student can re-take the examination in order to get an improved score) and adopting modular examinations (the student can sit for modules, or parts of an examination, over a period of several years, with the intention of accumulating a profile of achievement that is sufficient to gain entrance to preferred courses). These are strategies that have been adopted outside the region by examination boards in England and Wales. Some would argue, however, that modularization can add to the complexity of the assessment system and introduce a different kind of examination pressure: to be constantly accumulating more and better scores.

A frequent complaint about examinations is that they divert the attention of schools to getting good examination results at the expense of educational outcomes that are not examined. There is undoubtedly some truth in this. But there is also the counter-argument that if the examination is comprehensive and all key objectives are

⁷ See, for example, the guidelines on moderating school assessments published by the Qualifications and Curriculum Authority (QCA) in their code of practice for GCSE, GCE, VCE, GNVQ and AEA examinations.

assessed in a balanced way, then teaching to the examination is quite appropriate.⁸ Indeed, in systems with subject-based examinations and good alignment between the curriculum and the examination, the complaint of the examination tail wagging the curriculum dog is rarely heard. In systems where a more generalized academic ability test is used to control access to higher levels of education, the complaint often has greater legitimacy. However, it is also true that subject-based examinations place greater pressures (welcome or otherwise) on students to work hard in all their subjects, whereas in systems without such examinations, there is less pressure to study hard at school.

3.3 Catering for an expanding and more diverse student candidature

As provision is expanded and greater opportunities are made available for all young people to gain access to a full secondary education, so examination systems come under pressure to cater for greater numbers of candidates and a greater diversity of aptitudes, abilities and interests. Sheer numbers of candidates implies the need for better logistics, more trained markers and greater automation of examination processes. These are matters that are relatively straightforward to solve, although requiring significant effort and resources.

Catering for a wider range of abilities among candidates presents a more complex challenge, because it means educating the public. Once the majority of students stay in school to complete their lower and upper secondary education, the difference in abilities between the bottom and top ten percent of examination candidates may be equivalent to six or more years of education; and there is often an increase in the proportion of less academically able students sitting examinations (Whelan, 2009). This in turn can generate a public perception that education standards are falling, even though they may have risen for

⁸ See discussion in Madaus, G.F., Russell, M., and Higgins, J. 2009. *The Paradoxes of High Stakes Testing: How They Affect Students, Their Parents, Teachers, Principals, Schools, and Society*. Charlotte, NC, Information Age Publishing. While negative impacts of examinations on curricula are often claimed, few studies provide empirical evidence in support of claims. A notable exception is the review of research by Au, W. 2007. High-stakes testing and curricular control: A qualitative metasynthesis, *Educational Researcher*, Vol. 36, No. 5, pp. 258–67. This review, while confirming the tendency towards a narrowing of the curriculum, identified that, “in a significant minority of cases, certain types of high-stakes tests have led to curricular content expansion, the integration of knowledge, and more student-centered, cooperative pedagogies”. In other words, all depends on the quality of the tests.

that part of the cohort that traditionally sat for the exams. Simply failing large numbers of candidates is not an acceptable solution when the aim is to educate all students to high standards: the solution followed in most advanced nations has been to seek to provide better information about what students actually know and are able to do, by analyzing examination results. This implies moving from a normative approach to reporting results in which fixed percentages of students are allocated different grades, regardless of the standard of work they produce, to a standards-referenced approach to reporting results.⁹

Under standards referencing, candidates' results are reported with reference to a set of defined levels or standards of performance. There are no fixed percentages – these can go up or down – but there are fixed standards. This means that it is possible to know whether standards are changing over time. In addition, under standards-referenced reporting, standards are transparent. There are written descriptors of what the typical student who is awarded a particular grade/level knows and can do and, examples of student work and responses to questions that illustrate the standards. Explicit standards facilitate teaching and learning. Students can be shown what they have to do to be awarded higher grades or levels and teachers know what they have to do to assist students to get better results. Explicit standards are also useful to employers and tertiary institutions in making selection decisions.

The introduction of standards-referenced reporting calls for great care in the initial setting of the standards. They must reflect the full spectrum of student abilities and allow users to make appropriate decisions. Because it is difficult to make fine distinctions between different levels of performance via written descriptors, the number of levels is typically restricted to five or six (e.g. grades A-E). Comprehensive annotated examples of student work illustrating the relevant standard are particularly important as a means of ensuring a proper understanding of the standard.

⁹ Much of the basic conceptualization of standards referenced assessment and how it contrasts with normative assessment was formulated by Sadler, D.R. 1989. Formative assessment and the design of instructional systems. *Instructional Science*, Vol. 18, pp.119-44. For a description of its application within a modern examination system, see New South Wales Board of Studies. 2003. *HSC Assessment In a Standards Referenced Framework: A Guide to Best Practice*. Sydney, New South Wales Board of Studies.

Establishing the boundaries between levels is a matter of setting cut scores, which are the minimum scores for a level. There are several well-known methods for making such decisions, involving making use of expert judgement¹⁰, psychometric equating, or a combination of the two. While systems such as Australia (NSW) have apparently been successful in maintaining standards using expert judges to fix cut scores¹¹, in other jurisdictions outside the region perceptions are different. In the UK for example, there is a view that it has led to a downwards drift in standards with larger proportions being awarded higher grades and universities complaining about the difficulty this poses in making selection decisions.¹² It should be noted, however, that Australia (NSW) does not rely solely on standards-referenced reporting, but also makes use of strictly normative indices of performance. The use of psychometric methods to monitor standards from year to year is something that is common in systems using selection tests but rare in examination systems that employ subject-based examinations. Hong Kong SAR is an example within the Asia-Pacific region of a system that uses psychometric equating to maintain standards within a given subject over time.

In catering for a greater diversity in the abilities of candidates, best practice points to adopting a combination of both norm-referenced and standards-referenced approaches to reporting, with a special emphasis on the latter as a means of better reporting what students know and are able to do. It also points to the desirability of adopting a combination of expert judgement, statistical data and modern psychometric methods to maintain and assure public confidence in performance standards.

Finally, universal provision of secondary education brings the accompanying challenge of responding to a greater diversity of aptitudes and interests among students. Within the traditional academic curriculum, this often means access to a greater range of

¹⁰ Particularly the widely used Angoff method (Angoff, W. 1971. Scales, norms and equivalent scores. R.L. Thorndike (ed.), *Educational Measurement*. Washington D.C., American Council on Education).

¹¹ See Masters, G. N. 2002. *Fair and Meaningful Measures: A Review of the NSW Higher School Certificate*. Camberwell, Victoria, ACER.

¹² For a thoughtful discussion on the problems of linking successive examinations and the particular issues surrounding A-Level in the UK, see especially Newton, P.E. 2005. Examination standards and the limits of linking. *Assessment in Education*, Vol. 12, No. 2, pp.105-23.

subjects. But invariably, there are pressures to open up the curriculum, assessment and certification to embrace vocational education and applied learning.

In some education systems within the Asia-Pacific region, the range of subjects at upper secondary level is quite limited, while in others it is very wide. Lack of choice is something that can readily be addressed. But too much choice can perhaps be an even greater problem as it reduces the number of candidates taking a given subject, thus making it harder to establish between subject comparability. In addition, maintaining quality and consistency in question setting and marking become increasingly difficult as subjects proliferate.

In many countries within the Asia-Pacific region, students and their parents often aspire to a university education with the prospect of following professional careers. But there are many students who are neither inclined nor suited to such a path. These seek to enter trades or careers requiring a more practical approach to learning. For them, the traditional academic curriculum is often unsatisfying. Education systems, therefore, are under increasing pressure to offer more vocationally oriented courses with different kinds of assessment, reporting and credentialing. In addition, there are many high ability students who while capable of academic studies prefer a practical approach to learning rather than a theoretical one. These students welcome the chance of engaging in high-level applied learning as opposed to theory-based learning.

There are many challenges in meeting such demands. Learning is by definition more practical. Thus assessment must follow suit and not be confined to pencil-and-paper examinations. Reporting is likely to be competency-based and standards will typically be established by confederations of industries and trades. For these reasons, examinations for vocational courses are often conducted by separate organizations with greater familiarity and links to business, industry and the trades.

3.4 Assessing a wider range of curricular objectives

A common criticism of examinations is that they contain too many questions that assess memory and rote learning of factual information at the expense of insufficient questions that assess students' thinking

skills and their ability to reason, justify a position and solve novel problems. In learning character-based languages such as Chinese, memory is indeed important¹³ and not to be underrated. However, in the modern information age in which basic factual information is increasingly readily available to all, there needs to be greater attention paid to examining the effective use of information within the context of a 'thinking' curriculum.

Internationally, Programme for International Student Assessment (PISA) provides excellent models of questions that assess the ability of students to apply information as opposed to memorizing it. Moreover, most examination systems within the region have made concerted efforts in recent years to reduce reliance on memorization by increasing the requirement to process information, some of which is supplied within the examination questions. But in spite of these efforts, candidates still frequently resort to memorization of 'model' essays and formulaic responses to open-ended questions. It is possible to significantly and rapidly bring about a change through (a) the use of a test blueprint that specifies the kinds of thinking abilities that will be assessed, (b) by the introduction of new question formats that minimize demands on memory but maximize demands on the ability to apply information, (c) through independent reviews of draft questions to identify and eliminate those that may be answered through a memorized response, and (d) through marking rubrics that penalize such responses.

Another persistent criticism of many examinations within the region is that they tend to restrict attention to those outcomes that are amenable to paper-and-pencil assessment within a time frame of one to three hours. Many valued outcomes cannot be assessed through a written examination, including oral language ability, the ability to undertake an extended investigation into a topic, undertaking laboratory work or practical assignments, creating a portfolio of extended writing or artwork, demonstrating information technology skills, and a range of general competencies such as the ability to work as a member of a team and to show initiative, creativity and perseverance.

All of these outcomes can be assessed by teachers. The problem lies in finding a way of ensuring the consistency of the assessments and

¹³ For a wide-ranging review of learning in a Chinese context, see especially Watkins, D. and Biggs, J. 1996. *The Chinese Learner: Cultural, Psychological and Contextual Influences*. Hong Kong SAR, Central Printing.

incorporating them into the overall examination process. As already mentioned, in Australia, New Zealand, Hong Kong SAR of China and Singapore, school-based assessment has been in place for many years to ensure that this wider range of curricular objectives can be explicitly assessed as part of the examination. In each of these countries, processes are in place to 'moderate' such assessments to ensure comparability across teachers and schools. This can be achieved using (a) peer consensus moderation in which teachers from different schools meet to compare standards and agree on final marks, (b) cross marking in which a teacher from another school marks the students' work, (c) checking of a sample of each schools' assessments by an external panel, and (d) statistical moderation in which the distribution of marks awarded for school-based assessments is aligned with the distribution of the students' scores on the written part of the examination.

In all countries in which school-based assessments have been introduced to allow measurement of a wider range of curricular outcomes, there have been initial concerns regarding the integrity and comparability of such assessments. In order to establish trust in the arrangements, it has typically been necessary to begin in a small way with structured assessments in a limited number of subjects that are statistically moderated against examination scores, and that contribute a relatively small part of the total examination score of a given subject (between 20 and 30 percent for example). Once confidence in school-based assessments and experience in moderating them has been gained, they can be extended more widely, be less subject to statistical moderation and allowed to constitute a greater proportion of the final examination result.¹⁴

Throughout the Asia-Pacific region, the acquisition of competence in speaking and listening in a second language (often English), is of great significance. Assessing oral language can be enormously demanding and open to claims that different assessors apply different standards in making their assessments. This has led to considerable experimentation within the region into ways of standardizing oral language assessments. For example, in Japan the

¹⁴ For a description of statistical moderation methods, see Board of Studies. 1999. *Statistical Moderation of VCE Coursework*. Carlton, Victoria, Board of Studies. For an overview of the advantages and potential pitfalls of introducing moderated school-based assessment, see especially QCA. 2005. *A Review of GCE and GCSE Coursework Arrangements*. London, QCA.

National Center for University Entrance Examinations has made use of its country's expertise in audio technology to introduce a listening exam for candidates of the English (written) exam. A specially designed integrated circuit (IC) player is provided to all candidates so that each can listen to the same voice during the examination. While this overcomes many limitations of other methods of conducting such examinations, it adds new complications and technical issues, such as device failure and the need to train students in the use of the player.¹⁵

What this Japanese example highlights is that new technologies are increasingly used to deliver examinations and in particular to enable the assessment of a greater range of curricular outcomes. Naturally, this tends to first occur in the assessment of a subject, such as Information and Communications Technology. But some examination boards are beginning to offer sections of other subjects online rather than as a written examination. This is a trend that can be expected to accelerate as computers become more widely available and used in everyday learning in schools.

3.5 Assuring quality and gaining public confidence

In most countries within the Asia-Pacific region, examinations represent an important quality control mechanism. When the examinations are demanding they heighten the expectations of students, parents, teachers and school administrators regarding standards, effort and achievement.

But they also heighten the expectations of the same stakeholders regarding the way examinations are conducted. Because examination results are used as the main, if not the sole basis for making decisions of great consequence to the futures of individuals, there is a corresponding expectation that examinations will run smoothly without cause for complaint and that exam results will at all times be accurate and error free. In practice, this is extremely hard to achieve. A typical examination is likely to involve hundreds if not thousands of temporary examination personnel, including hundreds of teachers who score responses to dozens of questions answered by tens of thousands of candidates. Running examinations is logistically

¹⁵ For an account of the introduction of the National Center for University Entrance Examinations IC players, see: www.dnc.ac.jp/dnc/gaiyou/pdf/youran_english.pdf

complex and there are many points at which human error can occur. When it does, there is an understandable outcry. Trust in the system is undermined.

For these reasons, modern examination boards need to adopt sophisticated approaches to assure quality, reduce risks and eliminate errors, of which the following deserve particular attention:

1. Paying close attention to the recruitment and training of all examination personnel;
2. Creating a culture in which all assume responsibility for improving quality;
3. Establishing an effective system of internal controls;
4. Automating processes to eliminate human error;
5. Designing and implementing fair and transparent results and appeals processes.

Examinations depend significantly on the efforts of a large number of part-time staff, mostly teachers in schools, who act as setters, markers and exam supervisors. They may have to perform examination duties *gratis* as part of their regular positions, or receive honorariums for the work they do rather than remuneration reflecting the actual complexity and responsibilities of the tasks they are required to perform. On the other hand, setting and marking are often considered high status activities that confer various advantages on those selected for the task, thus ensuring a steady stream of applicants. To improve the effectiveness of such staff, modern examination boards go to considerable lengths to select the best qualified staff to undertake key roles and to provide comprehensive training to all staff. Errors tend to occur when part-time staff are unfamiliar with what they should do in particular situations. Training needs to anticipate such situations and provide clear guidance on appropriate responses. Training manuals and videos are essential tools to codify practice. In terms of best practice internationally, England and Wales provide useful models in creating special positions for examinations personnel within schools and for creating a Chartered Institute of Educational Assessors to raise the status and quality of training of those who engage in examination-related activities.¹⁶

¹⁶ The website of the CIEA provides a information about their activities: www.ciea.org.uk

For full-time staff, the key issue is often changing the culture from one in which established routines are followed each year, irrespective of whether they are effective, and in which mistakes are covered up, to one in which staff at all levels are rewarded for openness about inadequacies in current practice and for suggestions to improve the system. Within the Asia-Pacific region, this can sometimes go against cultural norms in which there may be unquestioning respect for authority, making such changes difficult to accomplish. Changes in the prevailing organizational culture need to be backed up with attention to internal controls, to the establishment of a quality assurance function and to systematic internal audits of high risk areas.

An important strategy for eliminating human error (and for speeding up the processing of examinations) is to automate processes and reduce manual handling as far as possible. This includes the use of bar codes to track examination scripts and onscreen marking to minimize the risk of lost scripts and marking errors and to facilitate real time supervision of the quality of marking. It also includes automation of the various phases of the examinations process from registration through to issuing of results. Some of the best examples of automation within the Asia-Pacific region are found in China, where sophisticated centralized onscreen marking of millions of scripts is operational in most provinces and has resulted in significant improvements in speed and reliability.¹⁷

Finally, quality and public confidence require transparency in the way results are reported and in processes for querying them. This requires examination authorities to provide information on the marks awarded for different papers or even individual questions. In some countries, such as the UK, privacy laws mean that examination data belong to the candidates who have a right to see their examination script along with any marks and comments that have been added to it. Not only must examination authorities have the means to provide this information under specific situations, they must also ensure that the marking process is sufficiently robust to withstand this kind of scrutiny. For situations in which candidates feel that they have been unfairly treated, it is important that there are transparent, accessible and fair processes for lodging and dealing with complaints and appeals. The appeals process should deal effectively with legitimate claims but not

¹⁷ For a brief description of the onscreen marking system of Hong Kong Examinations and Assessment Authority, see: www.hkeaa.edu.hk/DocLibrary/Media/Leaflets/ea-osm-eng.pdf

allow itself to be overwhelmed with frivolous requests. In an attempt to ensure a credible and impartial appeals process, Hong Kong SAR has established an internal Appeals Review Committee in which prominent members of the legal profession play a key role.



Section 4:

Reviewing Examination Systems – Key Questions

The following 20 guiding questions are intended to assist planners and managers in reviewing their examination system. The questions follow on from the key areas for improvement identified in the preceding section. The term 'authority' is used to refer to the organization responsible for examinations.

Assuring integrity of assessments

1. Has a risk assessment of examination security and supervision been carried out? Have areas of vulnerability been identified and action taken to minimize risks?
2. Does the authority have the backing of relevant regulations, legislation and law enforcement bodies to enable prompt action in cases of suspected malpractice; and are there appropriate penalties for offenders?
3. Does the authority have access to high-level, independent legal advice and assistance in handling complaints and dealing with cases of malpractice?

Reducing examination pressures

1. Is there scope for eliminating high-stakes examinations at the end of primary school and for providing greater access to upper secondary and higher education?
2. Is there scope for incorporating school-based assessments into the examination process and for allowing them to contribute to a significant proportion of final assessments?
3. Are there second-chance opportunities and alternative routes for students to gain entry into higher education?

Catering for an expanding and more diverse student candidature

1. Do standards allow the majority of students who are diligent in their studies to achieve a 'passing' grade, while providing the highest levels of challenge to the most able?
2. Are there rigorous processes for maintaining standards over time?
3. Does the authority use a combination of both norm-referenced and standards-referenced approaches to reporting results?
4. Are examinations offered for a range of subjects, including applied and vocationally oriented subjects?
5. Is there a qualifications framework that confers status to applied and vocationally oriented subjects and provides pathways to work and further study?

Assessing a wider range of curricular objectives

1. Is there close alignment between the curriculum and the examinations?
2. Is there a systematic attempt to assess important outcomes that cannot readily be assessed in written examinations?
3. Are effective moderation procedures in place to enable assessment of these outcomes to contribute significantly to overall examination results?
4. Are innovative approaches being taken to measure important outcomes that cannot be assessed in written examinations, including use of new information technologies?

Assuring quality and gaining public confidence

1. Is close attention given to the recruitment and training of all examination personnel, especially part-time staff and teachers in schools assigned examination duties?
2. Is there a culture in which all assume responsibility for identifying weaknesses and improving quality?
3. Is an effective system of audit and internal controls in place?

4. Have examination processes been automated to improve efficiency and to eliminate human error?
5. Are there fair and transparent appeals processes in place to handle complaints and to compensate those whose performance has been adversely affected through no fault of their own?

Section 5:

Considerations in Changing Examination Systems

Changing examination systems is particularly complex because of the difficulty of mounting small-scale trials of new methods and approaches, as these create the potential for unfair treatment of those in or not in the trials. In other words, when a change is made to an examination system, it typically needs to be a change to the whole system. In addition, there is a narrow window of opportunity in which to make changes as the annual cycle of delivering examinations means that for most of the year, staff are occupied implementing and maintaining the current system. A further complication is the need to give several years notice of major changes to the system so that schools can be properly forewarned and teachers and students can be fully briefed and prepared. The following are five considerations to keep in mind in bringing about changes to examination systems.

Linking to broader reforms

Reforms to examination systems are most successful when they are conceived as part of a wider reform to improve the quality of teaching and learning or to extend access and opportunity. By linking to wider reforms, it is possible to mobilize a broader base of support and funding and to create a more compelling argument for change. Reforms to examination systems carried out in isolation run the risk that they generate unintended consequences for other parts or aspects of the education system.

Learning from others

While mounting local trials may be difficult or impossible, much can be learned by studying what other systems have done to improve their examinations. This is best done through well-organized and focused visits by a team of people to several different systems that have attempted to implement similar reforms. In this way, there is an opportunity to gather a great deal of information about what works, what the pitfalls

are and what can be done to ensure a smooth implementation. It also builds commitment among those responsible for promoting and implementing changes. Leading examination systems always look to international best practice to benchmark their own practices.

Communicating the vision

Before implementing any changes, it is advisable that they be communicated in ways that explain exactly what they entail, that offer a compelling explanation as to why they are needed, and that set out how the examination process will look and work once they have been made. This generally entails a 'green paper' that can be widely distributed to all stakeholders as the basis for discussing the proposed changes. Such a document should preferably have the endorsement of respected persons or bodies within the education system and should be championed by one or more prominent leaders.

Consultation

Because the devil is almost always in the detail, it is important to engage in a comprehensive programme of consultations with all stakeholders to clarify and elaborate proposals and to identify areas that generate resistance or are problematic. Following such consultations it will be necessary to modify the original proposals. Once there is a general consensus regarding the way forward, publication of a 'white paper' will elaborate the agreed changes and the way ahead.

Strategic implementation

To avoid the problem of too much change at one time, it is often preferable to introduce change in a strategic way over a period of several years. This allows critical or relatively straightforward changes to be implemented at an early stage, with less critical or more contentious changes to be phased in at a later time.

Leadership and management

Changing an examination system often requires different kinds of leadership and management skills, structures and approaches than

those required for maintaining current systems. It is often necessary to bring in new leaders or to establish new teams to undertake the change agenda, leaving a core staff to maintain current systems. The core staff will be progressively involved in the change agenda so that they are ready to assume responsibility for the new system once it is implemented.

Annex 1:

Summary Information on Examinations in Countries in the Asia-Pacific Region

The following table summarizes basic information about examinations¹⁸ at the secondary level in the Asia-Pacific region. Compiled by the author and UNESCO Bangkok, much effort has been made to verify the accuracy of the information by consulting official documents, relevant ministry officials, and websites of the examining authorities.

Annex Table 1: Examinations in Countries in the Asia-Pacific Region

Country	Examination	Candidature & Purpose	Examining Body
Australia: <i>New South Wales</i>	School Certificate Higher School Certificate	End of Year 10 ¹⁹ (completion of lower secondary) End of Year 12 (completion of upper secondary and entry to higher education)	New South Wales Board of Studies
Australia: <i>Queensland</i>	Queensland Core Skills Test	End of Year 12 (entry to higher education)	Queensland Studies Authority
Australia: <i>South Australia</i>	South Australian Certificate of Education (SACE)	End of Year 12 (completion of upper secondary and entry to higher education)	South Australian Certificate of Education Board, South Australia
Australia: <i>Tasmania</i>	Tasmanian Certificate of Education	End of Year 12 (completion of upper secondary and entry to higher education)	Tasmanian Qualifications Authority

¹⁸ The examinations pertain to those required in general secondary education and do not include those for vocational and technical secondary schools.

¹⁹ The terminology used for level of schooling varies among education systems in the region, with many using the term 'grade'. In this booklet, the term "Year" is used. Year 1 refers to the first year of primary education.

Country	Examination	Candidature & Purpose	Examining Body
Australia: <i>Victoria</i>	Victorian Certificate of Education	End of Year 12 (completion of upper secondary and entry to higher education)	Victorian Curriculum and Assessment Authority
Australia: <i>Western Australia</i>	Western Australian Certificate of Education (WACE)	End of Year 12 (completion of upper secondary and entry to higher education)	Curriculum Council of Western Australia
Bangladesh	Secondary School Certificate Examination	End of Year 10 (entry to Year 11 of upper secondary)	Seven general region-based Boards of Intermediate and Secondary Education located in Barisal, Chittagong, Comilla, Dhaka, Jessore, Rajshahi, Dinajpur, and Sylhet; Bangladesh Madrasah Education Board; and Bangladesh Technical Education Board
	Higher Secondary Certificate Examination (HSC)	End of Year 12 (completion of upper secondary and entry to higher education)	
Bhutan	Bhutan Certificate of Secondary Education Examination (BCSE)	End of Year 11 (entry to upper secondary)	Bhutan Board of Examinations
	Bhutan Higher Secondary Education Certificate Examination (HSC)	End of Year 13 (completion of upper secondary and entry to higher education)	

Country	Examination	Candidature & Purpose	Examining Body
Brunei Darussalam	Primary Certificate of Examination (PCE)	End of Year 6 (entry to lower secondary)	Department of Examination, Ministry of Education
	Lower Secondary Assessment (Penilaian Menengah Bawah)	End of Year 9 (entry to upper secondary)	
	General Certificate of Education (BCGCE) 'O' Level	End of Year 11 (entry to Year 12 of upper secondary)	
	General Certificate of Education (BCGCE) 'A' Level	End of Year 13 (entry to higher education)	
Cambodia	National Examination for Lower-Secondary Education Certificate	End of Year 9 (completion of lower secondary and entry to upper secondary)	Examination Office of the General Secondary Education Department, Ministry of Education, Youth and Sport
	National Examination for Upper-Secondary Education Certificate	End of Year 12 (completion of upper secondary and entry to higher education)	
China	National Higher Education Entrance Examination	End of Year 12 (entry to higher education)	National Education Examinations Authority, Ministry of Education

Country	Examination	Candidature & Purpose	Examining Body
Fiji	Fiji Intermediate Examination	End of Year 6 (entry to lower secondary)	Examinations and Assessment Unit, Ministry of Education
	Fiji Eighth Year Examination	End of Year 8 (entry to Year 9 of lower secondary)	
	Fiji Junior Certificate Examination	End of Year 10 (entry to upper secondary)	
	Fiji Leaving Certificate Examination	End of Year 12 (completion of Year 12 and entry to Year 13 of upper secondary)	
	Fiji Seventh Form Examination	End of Year 13 (entry to higher education)	
	* First three examinations will be abolished by 2011.		
Hong Kong SAR of China	Hong Kong Certificate of Education Examinations (HKCEE)	End of Year 11 (completion of Year 11 of upper secondary and entry to Year 12 of upper secondary)	Hong Kong Examinations and Assessment Authority
	Hong Kong Advanced Level Examination (HKALE)	End of Year 13 (completion of upper secondary and entry to higher education)	
India	All India Secondary School Examination (AISSE)	End of Year 10 (completion of Year 10 and entry to Year 11 of upper secondary)	Central Board of Secondary Education (CBSE)
	Indian Certificate of Secondary Education (ICSE)	End of Year 10 (completion of Year 10 and entry to Year 11 of upper secondary)	Council for Indian School Certificate Examination (CISCE)

Country	Examination	Candidature & Purpose	Examining Body
India (cont.)	All India Senior School Certificate Examination (AISSCE)	End of Year 12 (entry to higher education)	Central Board of Secondary Education (CBSE)
	Indian School Certificate (ISC)	End of Year 12 (entry to higher education)	[Private board for Anglo-Indian studies]
Indonesia	School Final National Examination (UASBN)	End of Year 6 (completion of primary and entry to lower secondary)	National Education Standards Agency
	National Examination (UN-Ujian Nasional)	End of Year 9 (completion of lower secondary and entry to upper secondary)	
	National Examination (UAN-Ujian Akhir Nasional)	End of Year 12 (completion of upper secondary and entry to higher education)	
Iran, Islamic Republic of	Regional/Local Examination	End of Year 5 (completion of primary and entry to lower secondary)	Regional/school district
	Regional/Local Examination	End of Year 8 (completion of lower secondary and entry to upper secondary)	Regional/school district
	High School Diploma (<i>Diplom-Motevaseteh</i>)	End of Year 11 (completion of upper secondary and entry to pre-university course)	General Office of Assessment and Evaluation of the Ministry of Education
	National Examination (for 2 to 3 subjects)	End of Year 12 (completion of pre-university course)	General Office of Assessment and Evaluation of the Ministry of Education

Country	Examination	Candidature & Purpose	Examining Body
Iran, Islamic Republic of (cont.)	National Entrance Examination (<i>Konkur</i>)	End of Year 12 (entry to higher education)	Education Evaluation Organization of the Ministry of Science, Research and Technology
Japan	National Center Test for University Admissions	End of Year 12 (entry to higher education)	National Center for University Entrance Examinations
Kazakhstan	Unified National Test (UNT)	End of Year 11 (completion of upper secondary and entry to higher education)	National Center for Testing (NCT), Ministry of Education and Sciences
Kyrgyzstan	National Scholarship Test	End of Year 11 (entry to higher education)	Ministry of Education, Science and Culture (MESK)
Lao PDR	Lower Secondary Achievement Examination for Lower Secondary Diploma	End of Year 8 (completion of lower secondary and entry to upper secondary)	Ministry of Education
	Upper Secondary Achievement Examination for Upper Secondary Diploma	End of Year 11* (completion of upper secondary and entry to quota places in higher education)	
	National Entrance Examination	End of Year 11* (entry to non quota places in higher education and post-secondary non-tertiary) * Year 12 will be introduced in year 2010/11.	

Country	Examination	Candidature & Purpose	Examining Body
Malaysia	Lower Certificate of Education (PMR)	End of Year 9 (selection to certain programmes in upper secondary)	Malaysian Examination Syndicate, Ministry of Education
	Malaysian Certificate of Education (SPM or MCE)	End of Year 11 (completion of Year 11 of upper secondary and entry to post-secondary)	Malaysian Examination Syndicate, Ministry of Education
	Malaysian Higher School Certification Examination (STPM)	End of Year 13 (entry to higher education)	Malaysian Examinations Council, Ministry of Education
Mongolia	Primary School Graduation Exam	End of Year 6 (entry to lower secondary)	Education and Culture Centre
	Lower Secondary School Graduation Exam	End of Year 10 (completion of lower secondary and entry to upper secondary)	Education and Culture Centre
	Upper Secondary School Graduation Exam (<i>Gerchilgee</i> - School Leaving Certificate)	End of Year 12 (completion of upper secondary)	Education and Culture Centre
	Higher Education Admissions Test	End of Year 12 (entry to higher education)	Educational Evaluation Centre
Nepal	District Level Examination	End of Year 8 (completion of lower secondary)	District Education Office and District Examination Committee
	School Leaving Certificate (SLC) Examination	End of Year 10 (completion of Year 10 of upper secondary)	Office of the Controller of Examinations, Ministry of Education

Country	Examination	Candidature & Purpose	Examining Body
Nepal (cont.)	Higher Secondary Education Examinations (HSE)	End of Year 12 (completion of upper secondary and entry to higher education)	Higher Secondary Education Board
New Zealand	National Certificate of Educational Achievement	End of Years 11, 12 and 13 (completion of upper secondary and entry to higher education)	New Zealand Qualifications Authority (NZQA)
Pakistan	Secondary School Certificate (SSC/ Matriculation)	End of Year 10 (completion of Year 10 of upper secondary and entry to Year 11 of upper secondary)	Federal/ Provincial Board of Intermediate and Secondary Education
	Higher Secondary Certificate (HSC/ Intermediate Certificate)	End of Year 12 (completion of upper secondary and entry to higher education)	
Papua New Guinea	Primary School Certificate Examination	End of Year 8 (completion of primary and entry to lower secondary)	Provincial Division of Education
	Secondary School Learning Certificate Examination	End of Year 10 (completion of lower secondary and entry to upper secondary)	
	Higher School Certificate Examination	End of Year 12 (completion of upper secondary and entry to higher education)	
Philippines	National Career Assessment Examination (NCAE)	End of Year 10 (assessment of career choice for higher education)	National Educational Testing and Research Center of the Department of Education

Country	Examination	Candidature & Purpose	Examining Body
Republic of Korea	College Scholastic Ability Test (CSAT)	End of Year 12 (entry to higher education)	Korea Institute for Curriculum and Evaluation
	National Assessment of Educational Achievement (NAEA)	Middle of Year 6 Middle of Year 9 Middle of Year 11 (Accountability test)	
Singapore	Primary School Leaving Examination (PSLE)	End of Year 6 (completion of primary and entry to secondary education)	Singapore Examinations and Assessment Board
	General Certificate of Education 'N' and 'O' Level Examinations	End of Year 10 (entry to post-secondary)	
	General Certificate of Education 'A' Level Examinations	End of Grade 12 (completion of post-secondary and entry to higher education)	
Sri Lanka	Scholarship Examination	End of Year 5 (entry to lower secondary)	National Evaluation and Testing Service
	General Certificate of Education 'O' Level Examinations	End of Year 11 (completion of upper secondary and entry to post-secondary)	
	General Certificate of Education 'A' Level Examinations	End of Year 13 (completion of post-secondary and entry to higher education)	
Thailand	Ordinary National Education Test (O-NET)	End of Years 6, 9 and 12 (national assessment at primary, lower secondary, and upper secondary levels required for all students)	National Institute of Educational Testing Service
	General Aptitude Test (GAT) and Professional Aptitude Test (PAT)	End of Year 12 (entry to higher education)	

Country	Examination	Candidature & Purpose	Examining Body
Viet Nam	National High School Graduation Exam or Viet Nam Baccalaureate-VB Exam	End of Year 12 (completion of upper secondary)	Ministry of Education and Training
	University Entrance Examination (UEE)	End of Year 12 (entry to higher education)	
	*These two exams will be replaced by one exam for completion of upper secondary and entry to higher education		

Annex 2:

Information Sources

The following is a selected list of sources of information about examination systems in the Asia-Pacific region accessible through the internet. All URLs accessed 29 January 2010.

Annex Table 2: Internet Sources on Country-specific Examination Systems in the Asia-Pacific Region

Country	Internet address
Australia: <i>New South Wales</i>	www.boardofstudies.nsw.edu.au
Australia: <i>Queensland</i>	www.qsa.qld.edu.au
Australia: <i>South Australia</i>	www.ssabsa.sa.edu.au www.sace.sa.edu.au
Australia: <i>Tasmania</i>	www.tqa.tas.gov.au
Australia: <i>Victoria</i>	www.vcaa.vic.edu.au
Australia: <i>Western Australia</i>	www.curriculum.wa.edu.au
Bangladesh	www.educationboard.gov.bd www.unescobkk.org/sepra/infobase
Bhutan	www.education.gov.bt
Brunei Darussalam	www.moe.edu.bn www.moe.gov.bn/departments/exam_dept/index.htm
Cambodia	www.moeys.gov.kh www.vnseameo.org/downloads/malay/Cambodia.doc www.unescobkk.org/sepra/infobase
China	www.moe.edu.cn/edoas/en/ www.neea.edu.cn/buttom/english.htm
Fiji	www.education.gov.fj www.education.gov.fj/core_6.aspx www.radiofiji.com.fj/fiji2/fullstory.php?id=20975
Hong Kong SAR of China	www.edb.gov.hk www.hkeaa.edu.hk/en
India	www.education.nic.in www.cisce.org www.cbse.nic.in
Indonesia	www.depdiknas.go.id www.wes.org/eWENR/00july/practical.htm www.unescobkk.org/sepra/infobase
Iran, Islamic Republic of	http://medu.ir/ www.britishcouncil.org/iran-discover-iran-education-report.doc

Country	Internet address
Japan	www.mext.go.jp/english www.dnc.ac.jp www.dnc.ac.jp/dnc/gaiyou/pdf/youran_english.pdf www.unescobkk.org/sepra/infobase
Kazakhstan	www.edu.gov.kz/en http://webapps01.un.org/nvp/frontend!policy.action?id=885
Kyrgyzstan	www.testing.kg/en
Lao PDR	www.moe.gov.la/index.php?lang=en www.unescobkk.org/sepra/infobase
Malaysia	www.moe.gov.my www.moe.gov.my/lpm www.mpm.edu.my www.unescobkk.org/sepra/infobase www.seameo.org/index.php?option=com_content&task=view&id=64&Itemid=87
Mongolia	www.mecs.gov.mn www.unescobkk.org/sepra/infobase
Nepal	www.moe.gov.np www.hseb.edu.np www.soce.gov.np/index_main.php www.unescobkk.org/sepra/infobase
New Zealand	www.nzqa.govt.nz
Pakistan	www.moe.gov.pk www.fbise.edu.pk www.biselahore.com www.unescobkk.org/sepra/infobase
Papua New Guinea	www.education.gov.pg www.unesco.org/iau/onlinebases/systems_data/pg.rtf http://education.stateuniversity.com/pages/1166/Papua-New-Guinea-EDUCATIONAL-SYSTEM-OVERVIEW.html
Philippines	www.deped.gov.ph www.deped.gov.ph/about_deped/organizationlinks.asp?id=16 www.unescobkk.org/sepra/infobase
Republic of Korea	http://english.mest.go.kr www.kice.re.kr/en www.wes.org/ewenr/02may/practical.htm
Singapore	www.moe.gov.sg www.seab.gov.sg
Sri Lanka	www.moe.gov.lk www.doenets.lk
Thailand	www.moe.go.th www.niets.or.th www.unescobkk.org/sepra/infobase
Viet Nam	http://en.moet.gov.vn www.unescobkk.org/sepra/infobase http://chinadaily.cn/world/2008-08/28/content_6978107.htm

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Asia-Pacific Secondary Education System Review Series No. 1

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