



International Approaches to Secondary Education

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for the Higher Education Quality Council of Ontario



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TABLE OF CONTENTS

Summary	4
Introduction	5
System ‘Ecology’	8
Similarities	9
Differences	10
Equity	11
The Place of Vocational Education	12
Country Comparisons	13
School Organization	13
Education Providers	14
Division of Education	16
General Overview of Schools	16
Public and Private Proportions of Schooling	17
Graduation Rate	19
Curriculum	22
Essential Learning Areas (Core Curriculum) and Soft Skills	24
Certification	24
New Competencies	26
Learning Skills/Key Skills	29
Community Service	24
Lifelong Learning	24
Information and Communication Technology	26
Equity	26
Curriculum Streams	29
Accountability and Testing	33
Assessment and School Examinations	34
Tracking and Reporting Progress	37
School Evaluation	39

Teachers and Teaching	42
Pedagogy	44
Perceptions and Status of Teachers.....	46
Teacher Qualifications.....	47
Teacher Recruitment.....	49
Teacher Evaluation	51
Professional Development.....	52
School Leadership Preparation and Qualifications	56
Educational Spending	58
Education Expenditure as a Share of the Gross Domestic Product	58
Funding Mechanisms and Funding of Private Schools	60
Conclusions	62
References	65
Appendix.....	72

LIST OF TABLES

Table 1: PISA Scores: 2000; 2003; 2006	6
Table 2: School Organization	13
Table 3: First-Time Upper Secondary Graduation Rates.....	20
Table 4: Curriculum.....	22
Table 5: Variation in Performance Within and Between Schools	29
Table 6: Accountability and Testing.....	33
Table 7: Teachers and Testing.....	42
Table 8: In-service Training Programmes for Teachers in Japan	54
Table 9: Educational Spending	58

SUMMARY

This paper uses publicly available reviews and documentary sources to review secondary schooling in Canada and six other countries in terms of its organization, curriculum, accountability systems, organization of teaching and leadership, and overall spending. The purpose of this paper is to consider what Canada could learn from other countries with high secondary school graduation rates. An examination of participation in and the impact of dual credits and Specialist High Skills Majors programs will be discussed in a subsequent report.

The main conclusions are:

- Each system is an ‘ecology’ in which the various elements of schooling are connected. While we can learn from other countries, plucking particular elements from one system for use in another is not an advisable strategy.
- Many features of secondary school systems are similar in these seven countries, but the systems also vary in some important ways.
- Despite attention to equity issues in all countries, most still have large inequities based on social background.
- A central challenge in all systems is how to combine secondary education leading to postsecondary studies with appropriate education and qualifications for employment.
- There are grounds for optimism in that some systems have produced dramatic improvements in outcomes in relatively short periods of time. The key to improvement appears to be a determined effort across an entire system taking into account both external evidence and local context.

INTRODUCTION


































Large-scale educational reform, otherwise known as systemic approaches to changing the way schools operate, is occurring throughout the world. Many countries, states or provinces have made efforts to increase the number of students graduating from high school, to improve high school outcomes, and to change patterns of postsecondary participation. Different strategies have been used to do this from a policy perspective, including changes in school organization, curriculum, assessment and accountability, programme requirements, teaching and learning practices, support services, and others. While there are many case studies of individual schools, and few of school districts or even of countries, there is not very much literature looking either conceptually or empirically at policy approaches to improvement in high school outcomes at a system-wide level. By analyzing government documents, academic literature and empirical research on the topic, this study aims to understand the different ways that countries structure their secondary schools in relation to graduation rates. The research question for this study asks: *What are the key elements of secondary school policy in countries/states/provinces with very high rates or rapid increases in high school completion in recent years?*

Our definition of ‘key elements’ for this study is under five headings – basic organization, curriculum, teachers and teaching, accountability and assessment, and finance. These headings are largely a result of data that are in the public domain and are reasonably comparable. Other areas that the research literature would suggest as important, such as teaching practices, teacher-student relationships, quality of leadership, expectations for staff and students, family connections, or student engagement, are harder to assess on a comparative basis, even though they are considered to have considerable impact on student and school performance.

The countries selected for this study include Canada, England, Finland, Japan, South Korea (referred to as Korea for this point forward), New Zealand and the US. These countries were chosen for three reasons:

1. Most had scored in the top 10 in the Programme for International Assessment (PISA) 2000, 2003 and 2006 (see Table 1);
2. The diversity of educational systems; and
3. The US provides the bulk of the literature on educational change.

Table 1: PISA Scores: 2000; 2003; 2006

2000		2003		2006	
Reading literacy		Mathematics		Science	
1.  Finland	546	1.  Finland	544	1.  Finland	563
2.  Canada	534	2.  South Korea	542	2.  Canada	534
3.  New Zealand	529	3.  Netherlands	538	3.  Japan	531
4.  Australia	528	4.  Japan	534	4.  New Zealand	530
5.  Ireland	527	5.  Canada	532	5.  Australia	527
6.  South Korea	525	6.  Belgium	529	6.  Netherlands	525
7.  United Kingdom	523	7.  Switzerland	527	7.  South Korea	522
8.  Japan	522	8.  Australia	524	8.  Germany	516
9.  Sweden	516	9.  New Zealand	523	9.  United Kingdom	515
10.  Austria	507	10.  Czech Republic	516	10.  Czech Republic	513
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15.  United States	504	24.  United States	483	21.  United States	489

(While this study was largely complete prior to the release of PISA 2009, the 2009 results would not change the picture in any significant way. It also should be noted that high scores in PISA are not always consistent with high graduation rates; Alberta and Quebec both score highly among Canadian provinces yet both have relatively low graduation rates. However, overall PISA scores remain a good indicator of the relative performance of education systems.)

More specifically, Canada, Finland, Japan, Korea and New Zealand were first chosen for this report because they were in the top 10 scoring countries in PISA for the 2000 (reading), 2003 (math) and 2006 (science) tests. PISA is a worldwide evaluation of 15-year-old school pupils' literacy scholastic performance in reading, math and science, coordinated by the Organisation for Economic Co-operation and Development (OECD). This assessment was first performed in 2000 and has been repeated every three years with an aim to improve educational policies and outcomes. Canada, Finland, Japan, Korea, and New Zealand were also chosen because they have experienced very high rates or rapid increases in high school completion in recent years. The UK (or for the purposes of this study, England, as the UK has 4 different educational systems) was chosen because it was also a top 10 scorer in two PISA tests (its scores were disqualified in 2003) and also because they have had significant increases in high school performance in the last 10 years.

The second reason these countries were chosen for this report was due to the diversity in their educational systems. Other top performing countries, such as Australia, Singapore or the Netherlands, were not chosen due to their similarity to other countries within the study.

Lastly, the US was chosen despite its lower performance on the PISA tests because the US produces the most literature on school improvement, allowing it to serve as a relevant comparison country. (It is also important to note that while the US and Canada are discussed in

broad country terms at times, due to the fact that educational decisions are made at the state and provincial levels, different provinces or state educational decisions will also be discussed when deemed appropriate.)

This report is based primarily on a wide range of secondary sources. We conducted careful searches of scholarly and other literature, including websites of ministries of education and other organizations in each country. We also made use of international sources and comparative studies where these were available. Although the search was done carefully, several caveats are in order. First, we could not always locate fully comparable information either in extent or depth for all countries for all the features of interest. As a result, some of the coverage is uneven and we cannot be sure that all the data are fully comparable (as is evident in the section on graduation rates). Second, much of the data comes from official sources such as government ministries, which may give an unduly positive (or, in some cases, negative) picture of the situation. Third, while we have endeavoured to use current information, given the rapidity of change in some systems, some specifics in this report may have changed since the source material we used was published. This report should not be read, therefore, as a completely reliable guide to the current situation in each country, but instead as a broad overview of the different approaches to secondary education around the world.

Comparative policy studies are tricky undertakings because they necessarily underplay the extent to which each jurisdiction is an ecology in which not only are the various elements of education policy intertwined, but the education system as a whole is connected in multiple and complex ways to the larger society (Levin, 2001). In most countries the education system can only be understood in relation to the overall political system and, often, to deep elements of culture. Comparative policy studies run the risk of simplifying their descriptions of the jurisdictions by focusing only on some elements. To understand particular features, though, often also requires understanding a whole range of other features of the society. A corollary is the tendency to overestimate the extent to which features of one education system can be transferred to another. This danger is evident in the degree to which we already hear public statements that Canada should borrow some policy, whether in education or some other field, from another country. For Canada, the comparison is often with the United States. Yet the Canadian political and institutional culture is quite different from that of the United States, and an acceptable policy in one is not necessarily so in the other.

We conclude that there is no single set of features that are connected to higher graduation rates in all settings, but that various configurations can be successful depending on context.

This does not mean, however, that we should not make comparisons among jurisdictions. Studying what other systems do is a worthwhile activity not because it gives us answers, but because it gives us questions and ideas. Careful comparative work raises new possibilities for any country to think about, and also allows us to see our own taken-for-granted practices with new eyes. It tells us that there are other ways to get to a goal and broadens our thinking about what these might be. That is the purpose of this study, and the report concludes with some discussion along these lines.

The main findings for the study include the following:

1. Each system is an 'ecology' in which the various elements of schooling are connected, and also interact with elements of the larger society. While we can learn from other countries, plucking particular elements from one system for use in another is not an advisable strategy because these features interact with each other.
2. Many features of secondary school systems are similar in all these countries. Basic forms of secondary school organization, main elements of curriculum, teacher and principal training and credentialing, and main forms of student assessment do not vary greatly across countries.
3. On the other hand, these systems vary in some important ways such as degree of school autonomy, class sizes, extra-curricular activities, the ways in which students are placed in various program tracks or streams, status of teachers, teacher evaluation, professional development, and types of exam/evaluation systems.
4. All the systems pay attention to equity issues but they do so in varying ways and to varying degrees. There are still large inequities based on social background in most systems. Countries vary in whether the inequity is primarily between or within schools, largely related to the degree of streaming.
5. A central challenge in all systems is how to combine secondary education leading to postsecondary studies with appropriate education and qualifications for employment. Countries have very different arrangements in this area, linked in important ways to the way the labour market is structured. Equality of regard for vocational programmes remains a challenge in most countries.

System 'Ecology'

Each system is an 'ecology' in which the various elements of schooling are connected (and also interact with elements of the larger society). It is tempting in the policy world to borrow pieces that we like from other places. For example, people may advocate eliminating testing or educating all teachers to the graduate level because the Finns do these things and have a high achieving system. However such ideas are misleading on two counts. First, we do not know what impact any particular feature of a system has on outcomes. There is good reason to think that no single aspect is decisive, but it is the combination of factors operating together, including some that we do not measure at all, that matter. For example, one might equally recommend that other countries should make Finnish their national language as a way of emulating Finnish results, or that having dubbed-in foreign language television, as the Finns do, is important for literacy. In education policy, too, cherry-picking individual features ignores the extent to which an education system is an ecology. We can and should learn from other countries, but cannot just pluck particular elements out of one system and put them in another.

Similarities

The secondary school systems in this study are alike in many respects. First, they are organized in similar ways. Most have 12 years of compulsory education with approximately 190 days a year and 20-30 hours per week spent in school. With the exception of the United States, where not all states exercise significant authority over schools, they all have strong centralized policies through national or provincial ministries of education. These ministries are responsible for setting standards, creating the curriculum, financing schools and districts, and making regulations that govern the school year. All countries give some authority and responsibility to local bodies such as municipalities, locally elected school boards, or school governing bodies whose responsibilities include the appointment of school staff.

Second, the core curriculum in these systems, even in the US with its multiple state or local curricula, tends to be quite similar, including: national languages; mathematics; science; social studies; arts; and physical education. The learning skills and attitudes that students should develop through the school curriculum are also similarly represented in all countries in this study. For example, communication, collaboration, problem solving, and independent learning are skills that all countries in this study perceive as important. In regards to curriculum, many countries are also offering greater opportunities for individualised learning to meet the needs, talents and aspirations of each student, whether it be academic, vocational, or workplace learning.

The widening of educational paths to raise its educational status is seen as advantageous from many governments' economic perspective. As a result, England, Finland, Korea and New Zealand have diplomas or certificates that reflect vocational education or employment skills as well as one that reflects traditional academic curriculum. Japan and Ontario, Canada also have opportunities for students to be involved in different educational pathways, including academic and a variety of specific vocational programmes, although there is no separate certification. However, in all countries in this study, the academic stream still has the greatest percentage of students. Concern also exists around whether such alternative pathways create desirable futures for students.

Third, teacher qualifications are quite similar across the countries in this study. While there are many ways to achieve teaching qualifications, the most common method in all countries is to obtain a university degree in education either following or concurrent with the study of subjects to be taught. Additional exams or qualifications are required in England, Finland, Japan and some parts of the US. These typically include literacy, numeracy, Information and Communication Technology (ICT), or other school or state set exams. Teacher evaluations by way of performance appraisals also take place in all the countries in this study, except Finland; however how they are evaluated differs. In all other countries, teacher performance appraisals are typically conducted by school administration, although Japan encourages self-assessment as well.

Fourth, principal training is relatively similar in all countries discussed in this study. Years of experience and a principal qualification course must be taken. Some additional professional development may also be required.

Accountability is similar in all countries in this study, as they all have testing at the local level as well as national or provincial/state level in Canada and the US. All of these countries also track the results of student progress, report on them to students and parents, and have a public reporting mechanism on system outcomes. National or provincial/state test results are typically reported by school or district.

School evaluations also take place in all countries in this study except Canada, although they vary from external evaluations that occur nationally (England, Korea, New Zealand and the US) to the school evaluations that take place on the local level (Finland and Japan).

Differences

While there are many similarities between the countries in this study, there are also many differences. For example, while the school curriculum is similar across the countries, and they all give some authority and responsibility to the local level, there is variation. Lesson plans and assessments, while aligned with the national/provincial curriculum may be, and frequently are, different in each district, school, or classroom.

Similarly, school organization, while having many commonalities among countries, does vary. What constitutes as graduation or a graduation fate is one variance. For example, in many provinces in Canada and states in the US, secondary school consists of grades 9-12 and New Zealand has an additional year 13. By contrast, Japan and Korea, like some European countries, divide high school into lower secondary (grades 7-9) and upper secondary (grades 10-12). Finland is similar although its upper secondary years are based by course and not year, so the completion time differs. England's compulsory education ends at the end of year 11. After this time students can attend sixth form (further secondary education), if they have the appropriate academic record.

Class sizes and the emphasis on extra-curricular activities vary across countries. Korea and Japan have high class size caps in comparison to the other countries, whereas Finland has no extra-curricular activities and all others vary by school. The percentage of students that attend public schools compared to private school also varies. Eighty-five per cent or more of the student population in the countries discussed in this report attend public school, except Japan and Korea. Japan has 69 per cent and Korea has 50-60 per cent of students attending public school. How public schools are funded range from government transfers to property tax to tuition. Private school funding also differs. Some countries fund private schools independently (i.e., England, US), others use a combination of public and private funds (i.e., Japan, Korea, New Zealand), and in Finland private schools are publicly funded.

The status of teachers, teacher recruitment, the nature of teacher evaluation, and teacher professional development are significantly different between countries. For example, teacher status is high in Finland, Korea, and Japan based on study results and national polls, but has middle level status in Canada, England, New Zealand and the US. Teacher recruitment differs, with Korea preferring central recruitment methods while others, such as Canada, New Zealand and the US, have decentralized teacher recruitment by district or even school. Teacher evaluation also differs as Finland does not evaluate teachers, while all others do. Some

jurisdictions link teacher evaluations to pay and promotion (i.e., England, New Zealand) and others do not (i.e., Ontario, Canada). Finally, teacher professional development is different in each country in terms of number of hours, how it is financed, and how it is carried out. Korea and Japan, for example, have very extensive professional development, with Korean teachers in the first five years of teaching averaging 48 days of professional development, which is largely self-paid, taking place during personal time. By contrast, Ontario, Canada offers six standard days of professional development which occur during the regular school day and is not self-funded, although many teachers may choose to pursue additional self-funded professional development, including graduate studies.

Finally, the per cent spent of the Gross Domestic Product (GDP) on elementary and secondary education ranges from 2.9 per cent in Japan to 4.7 per cent in New Zealand, as of 2006.

Equity

Equity is an important theme within this study because a successful system with high graduation rates must also be concerned with equity in outcomes among different social groups. All countries report high levels of political commitment to social inclusion and equality of opportunity. Various policies and programmes are in place in all countries in order to support all students of differing abilities and interests. However, while there are governmental aims for equity, international tests, such as PISA (OECD, 2010b) have found variation in student performance in relation to socio-economic background and the extent of this variation within and between schools.

According to the 2009 PISA report (OECD, 2010b) differences in students' family background characteristics explain up to 22 per cent of differences in student performance. With the OECD average of a 14 per cent variance in student performance explained by students' socio-economic status (SES), Korea (11%), Finland (8%), Canada (9%), and Japan (9%) show less impact of SES on student performance than the OECD average. The United Kingdom (14%), United States (17%) and New Zealand (17%) are at or above the OECD average.

Variation in student performance within and between schools is also a measure of student equity. Variation in performance occurs between students who are attending the same school. These students may display different abilities, effort or are exposed to different learning opportunities. Variance between schools occurs by the way students are allocated to schools; the way schools are organized; and the cultural, economic and geographical differences between schools. Korea, Finland and Canada had less variance in student achievement related to socio-economic status than did the other four countries, with Korea especially low and New Zealand the highest in the group. For all these countries, most of the variance in achievement related to SES occurs within schools, meaning that students do not tend to attend schools based on their socio-economic status. In general, countries with more between-school variance tend also to have a greater overall effect of socio-economic status on student outcomes.

The Place of Vocational Education

A central challenge in all systems is how to combine secondary education leading to postsecondary studies with appropriate education and qualifications for employment. School systems recognize that not all students will go on to postsecondary education and that a traditional academic education works against those students who are not directed to postsecondary. All countries also recognize the need for high levels of technical skills in the workforce. At the same time, there is a danger that programmes that do not lead to postsecondary education will be seen by students and teachers as second-class options and will produce worse outcomes for students. Since students' choice of destination is systematically related to their social class background, systems with very specific tracks or streams can end up segregating students based on socio-economic status, leading to significant equity challenges. The problem is made more acute because students frequently change their intentions during or after their secondary education, so systems that do not provide flexibility can further disadvantage their students.

COUNTRY COMPARISONS

School Organization

Table 2: School Organization

Countries	Education Providers	Years of Compulsory Education	Secondary School Grades	Length of school year	Hours per school week	Class Size	Extra-curricular Activities	% of students in public schools	Graduation Rate
Canada	province/territory	10-12 (varies per province)	9-12 or 10-12 (varies per province)	190-200 days	25-35	varies 20-35 max.	yes – varies per school	90%	Ontario: 80% (4 year programme)
England	national	11	9-11 (lower) 6 th form (upper)	190 days	25-35	20.9 (average)	yes- varies per school	90%	National: 77% (post-16 training)
Finland	national	9	9-10 (lower) 3 years (upper)	190 days	30	no regulation	no	95%	National: 95% (upper secondary)
Japan	national	9	7-9 (lower) 10-12 (upper)	175-190 days	17-20	40 max.	yes – varies per school	69.6%	National: 93% (upper secondary)
Korea	national	9	7-9 (lower) 10-12 (upper)	220 days	20-25	40-50 max.	very few	50%-60%	National: 93% (upper secondary)
New Zealand	national	12	9-13	190 days	35	25 max.	yes- varies per school	86%	National: 82% (post-compulsory); 58% (at 17 yrs); 14% (at 18 yrs)
US	state	10	9-12	175-185 days	25-35	varies 25-34 max.	yes- varies per school	89%	National: 68.8% (four year programme)

Education Providers

Canada remains the only federated nation within the membership of the OECD that has no federal minister or department of education. Each province or territory has a Ministry of Education that controls all aspects of its education system up to the end of secondary school. Ministries of Education are responsible for setting standards, creating the curriculum, financing the schools and districts, and making regulations that govern the school year. At the local level, education is controlled by locally elected school boards, whose responsibilities include the appointment of school staff. Lesson plans and assessments, while aligned with the provincial curriculum may be, and frequently are, different in each district, school, or classroom. Although the responsibility for education occurs at a provincial or territorial level, Canada has created the Council of Ministers of Education, Canada (CMEC), to ensure communication on issues such as funding, programmes, and student assessment across Canada.

In England, the Department for Education is now responsible for education and children's services since the change in government in 2010. In addition, the newly elected coalition government has created some new policies. For example, the previous government policy attempted to develop a more coherent approach to funding, planning, guidance and inspection (Hodgson & Spours, 2008), where the local authorities (LAs) were to fund, plan and co-ordinate education and training for 14-19 year olds at the local level. Now government policy is inviting all schools in England to become academies: publicly funded schools that operate outside of local authority control. They have more freedom than other publicly funded schools over their finances, curriculum, teachers' pay and conditions. The Academies Bill, which paves the way for these changes was given royal assent on July 27, 2010.

The Finnish National Board of Education (FNBE) is in charge of creating and implementing the core curricula, which has been formulated in collaboration with municipalities and schools, researchers, education authorities, teachers, teacher education departments, and so forth. While the FNBE creates the national curriculum, municipalities create their own curriculum (based on the national core curriculum) in order to cater to local needs. Similarly, every school can modify and shape its curriculum.

Korean education - both private and public - has centrally controlled curricula through the Ministry of Education and Human Resources Development (MOEHRD) which was quite uniform until recently. Prior to 1991, the MOEHRD had authority over the education budget, administration, policies, personnel, curriculum, instruction, approval of textbook adoption, licensing, and establishment of institutions. Following the Local Autonomy Law of 1991, most of the budget, planning and major administrative decisions were delegated to local authorities. However, the curriculum and the guidelines for developing textbooks are still determined by the MOEHRD (Guo, 2005).

In Japan, curriculum policy is created by the Central Council of Education, which is an advisory body to the Ministry of Education, Culture, Sports, Science and Technology (MEXT). The members of the council are experienced teachers, researchers and others with expertise in the field. In turn, the Ministry specifies the national guidelines (objectives and standard content) for each course of study. While Japan is often seen as having a centralized government, schools

do have autonomy to organize their own curriculum to meet local needs. MEXT formulates national education policy and the curriculum, administers public schools, establishes national educational standards, sets teacher salaries, defines the number of days and hours of instructional activity, and establishes supervisory services. However, responsibility for school budgets, specific educational programmes, school appointments and the supervision of schools rests at the local level.

In New Zealand, the national government decides the educational structure. The Ministry of Education is responsible for developing the curriculum, allocating resources and monitoring effectiveness. Individual schools are self-governed; local government has no role. The school principal assesses staff performance and manages the day-to-day activities of the school within policies established by each school's board of trustees. Other independent national agencies with major educational responsibilities for secondary school are:

1. The Education Review Office, an agency that publicly reports on the quality of education in all schools;
2. The New Zealand Qualifications Authority (NZQA), an independent body that administers qualifications, oversees the examinations system and develops the National Qualifications Framework;
3. Skill New Zealand, a government agency that oversees initiatives designed to build a highly skilled workforce through skills and training policies;
4. Specialist Education Services provides specialist services to students who have complex learning, communication and behaviour needs; and
5. Services Rapuara is a career planning service that works with schools to help them meet their obligations to provide career planning programmes for students. The Ministry of Education provides oversight to the system as a whole but these agencies have various degrees of autonomy.

The responsibility for the US's education system, similar to Canada, occurs at the state/district level. However, unlike Canada, the US has enacted several pieces of legislation at a national level (i.e., the No Child Left Behind Act of 2001) and the federal government provides important funding and policy directives and incentives to state and local systems. Other than national legislation, education structure is determined at the state and local levels. Each state creates policies outlining funding, teacher certification, textbooks and some states specify curricula. Locally-elected school districts collect taxes, construct buildings, purchase equipment, often determine instructional policy and employ teachers and other staff. Although all US states are autonomous, there are many similarities in the ways that they operate. However, there are few if any policies that are universal among the 50 states.

Division of Education

In Canada and the US, compulsory education begins at age six and extends to age 16 or 18. High schools in both Canada and the US typically cater to 14- to 18-year-olds.

England's compulsory education begins at age 5 and ends at age 16, or rather, age 17 effective in 2013 and age 18, effective in 2015. After the age of 16, students can attend sixth form (further secondary education), colleges, or other further education institutions.

In Finland everyone has the right to free nine-year education at a comprehensive school, beginning at age 7 and ending at age 16. Upper secondary school is not compulsory, although almost all students participate. Upper secondary school is divided into general upper secondary school and vocational school although simultaneous certification in both is possible.

In New Zealand primary school goes up to grade 6, intermediate school finishes at grade 8 and secondary school is the remaining five years of schooling. Between the ages of 6 and 16, primary and secondary education is compulsory for students.

Japanese and Korean compulsory schooling consists of 6 years of elementary school and 3 years of middle school. The additional 3 years of secondary school is optional, although most students attend. Apart from going to compulsory school, preparation often takes the form of attending extra-schools or hiring tutors.

General Overview of Schools

Most secondary schools in Canada and the US are considered comprehensive schools. Schools have relatively open boundaries giving parents a choice of schools within the limits of space availability and programme offering. Classes begin in September and end in June. The school year in the US is generally 175-185 days in length, and in Canada, 190-200 days in length. School days are typically 5-7 hours in both Canada and the US. Classes range from 30-90 minutes and may have alternating blocks each day. In Canada, class sizes are decided locally and only some provinces have class size limits, sometimes through policy and sometimes through collective agreements with teachers. In the US, the class size is usually set by the state or district. The Florida Constitution, for example, requires classes in the areas of language arts, reading, math, science, social studies, and foreign language to not exceed 25 students in grades 9-12. In New York, high school class size cannot be larger than 34 students.

Canadian and American schools have a variety of academic and non-academic activities, including sports, clubs, and other extra-curricular activities which are often carried out by teachers voluntarily (or sometimes paid in the US) on top of their regular teaching duties.

Secondary education in England begins in September and ends in mid-July. Terms consist of 6-8 weeks, with one or two week holidays intermitted. The school year consists of 380 half-day sessions. Minimum weekly lesson times (excluding breaks) are 25 hours for 14- to 16-year-olds. Classes are typically 1 hour in length and students usually take 5 classes per day. Class

sizes have fallen slightly in the past decade. For secondary schools, the average class size in 1997 was 21.7, compared to 20.9 in 2008 (de Waal, 2009). Schools often have extra-curricular activities, although the extent of the level of activity varies per school.

In Finland, the school year begins in mid-August and ends in the beginning of June. Upper secondary school usually consists of a 30-hour school week with 190 working days, although there is discussion of increasing this to 222 days per year. There is no segregation or streaming in schools in Finland and education is provided in neighbourhood schools to make school travel as short as possible. Schools do not typically offer after-school activities. Students normally participate in sport and other hobbies in their free time, in the evenings and at weekends. Schools do offer health care, transportation (if needed) and meals. Books and materials must be purchased individually. There are no national regulations concerning the pupil/teacher ratio in upper secondary school.

In Japan, the school year consists of at least 35 weeks and instructional hours vary from 17-20 hours each week (dependent on the age of the children). In post-compulsory senior high schools, the maximum number of students per public school class prescribed by law is 40. Each class is assigned a homeroom teacher who doubles as counsellor. In junior high school students have different teachers for different subjects and the teachers, rather than the students (as they typically do in North America), move to a new room for each 45 or 50 minute period. Over half of all Japanese junior high students spend 2-3 hours per day after school and on weekends in student-organized school clubs, such as broadcasting, Japanese fencing, or brass band.

The Korean school year consists of 220 days and 34 school weeks in each instructional year. Students receive between 830 and 1,156 instructional hours. The schedules are generally standardized; however, they can vary slightly from region to region. Class sizes are typically 40-50 students. There are very few extra-curricular activities, although students can spend up to 14 hours a day participating in after-school classes; studying with a tutor; or taking supplementary courses, such as English, Chinese, music, and math at the local neighbourhood “hogwan”.

The New Zealand school year starts at the end of January or early February and ends in December. By law, all schools are required to be open for instruction for 380 half-days in a year, which means that the start and end of the school year is not nationally fixed to a particular date. School days are usually 6 hours in length, with five 1-hour classes. There are no high school class size caps, but there is typically an average of 25 students per class. Private schools often have fewer students per class. Extra-curricular activities vary per school, but many secondary schools offer a variety of sport and arts-related activities.

Public and Private Proportions of Schooling

In Canada, more than 90 per cent of students attend publicly funded and governed schools. Approximately 5 per cent attend private schools and a small percentage of students are home schooled or attend special needs schools. Private schools are funded in some provinces but not in others, while Catholic schools are considered public in some provinces but not in others.

A minority of private schools in Canada are considered elite where the wealthy and prominent send their children. These schools have a great deal of prestige and prominence. The much larger proportion of private schools consists of religious based institutions.

England has both state-funded and private-funded (independent schools), single-sex or co-educational schools. Less than 10 per cent of students in England attend independent schools. Independent schools are not administered by local or national governments. They have the right to select their students. They are funded by charging tuition or obtaining funding from other sources, rather than supported by public funding. Religious affiliated and denominational schools form a subcategory of private schools, although quite a few of them are also in the public system (i.e., Church of England schools). Religious private schools often simply add religious instruction to the courses provided by local public schools.

In Finland, 95 per cent of students attend public school. Private schools are mostly faith-based schools. The founding of a private school requires a political decision by the Council of State. If they are founded, private schools get the same public funding as would a municipal school of the same size. Private schools cannot charge tuition fees and must admit pupils on the same basis as public schools. Private schools are also required to give students the same social entitlements that are offered at municipal schools (i.e., health care, meals).

Japan has a dual education system structure, consisting of a public sector controlled by central and local governments and a market-driven private sector. Both receive public subsidy, but at varying levels. Private schools in Japan generally have the same curriculum as public schools, although private schools may include religious education in their curriculum. Private schools often develop their own unique and individualistic education in order to attract students. Private sector education is most prominent in pre- and post-compulsory education, while the majority of compulsory education is in the public sector. In 2000, 29.4 per cent of upper secondary students were enrolled in the private sector (Guo, 2005).

In Korea, privately owned schools account for 40-50 per cent of all secondary schools. The expansion of the Korean education system was made possible through the active involvement of private schools. The government, with its limited resources and its commitment to primary education, has relied on private institutions to accommodate much of the demand at the secondary and higher education levels (Guo, 2005). However, private schools are not seen as elite institutions for the upper-class; instead they often function as second-best institutions. Due to the government restrictions on tuition and state support, these schools are less equipped while serving even larger class sizes than the public schools. Still, substantial tuition fees are necessary for both public and private high school attendance. Parents with income that falls below a specified amount may apply for a reduction or remission of the fees.

There are three major types of schools in New Zealand:

1. State schools, which are state-owned schools, funded per pupil, and regulated by the state;

2. State-integrated schools, which are privately owned schools that have “integrated” into the state system. They have the same per pupil funding and many of the same regulations as state schools; and
3. Independent schools, which are privately owned schools and receive 25-35 per cent of the average per pupil cost of educating a child. These schools are also subject to fewer regulations than state or state-integrated schools (LaRocque, 2005).

Around 86 per cent of students were enrolled in publicly owned and funded state schools in 2003. However, while enrolments are much lower in the independent and the state-integrated sectors compared to the state sector, they have grown more quickly. For example, independent school enrolments grew by 29.5 per cent (although from a low base) while state-integrated schools grew by 12.4 per cent between 1997 and 2003 (LaRocque, 2005). A 2003 survey in New Zealand found that 52 per cent of people surveyed thought private schools were better than state schools, and 47 per cent said that they would send their children to a private school if money were no object (Cone, 2003). Although school zoning based on geographic area has been reintroduced progressively since the mid-1990s, students not only have the right to attend the local school for which they are zoned, but are also able to attend out-of-zone schools if accepted by that school.

In the US, students typically have a choice between tax-funded public schools or privately funded private schools. Public school systems are supported by a combination of local, state, and federal government funding, and admission is usually based on residency. US private schools in 2009 served approximately 11 per cent of all K-12 students in 25 per cent of all US schools (Council for American Private Education, 2010). Private schools in the US range from religious based institutions, non-profit independent schools, and for-profit private schools. While public schools are free, private schools charge varying rates depending on location, the school's expenses, and the availability of funding from sources (i.e., churches), other than tuition. The average cost of one year of high school is \$10,549 (Council for American Private Education, 2010).

Graduation Rate

Getting accurate comparative information on high school graduation rates is difficult because countries have different definitions of completion and collect data in different ways. One important comparative measure is provided in *Education at a Glance, 2010* (OECD, 2010a). This analysis provides first-time upper secondary graduate rates derived by the sum of graduation rates for a single year of age, by programme destination, programme orientation and gender. The percentage shown below in Table 3 is calculated by netting out students who graduated from another upper secondary programme in a previous year, such as a student taking a 5th year of high school when they have already graduated. While this data provides a comparative measure among countries, the picture changes somewhat if one delves more deeply into what lies under these figures.

Table 3: First-Time Upper Secondary Graduation Rates

Country	Graduation Rate
Canada	76%
Finland	93%
Japan	95%
Korea	93%
New Zealand	78%
United Kingdom	92%
United States	77%

Canada's graduation rate is based on a 3 or 4 year, grade 10-12 or 9-12 programme. However the percentage of Canadians aged 20 to 24 who are not attending and have not completed high school or obtained an equivalent qualification, based on self-report as compiled by Statistics Canada, dropped from 17 per cent in 1990/91 to 9 per cent in 2010 (Statistics Canada, 2010). In other words, although a significant number of Canadian youth do not graduate from high school in the typical 4-year time frame, most do obtain a high school diploma or equivalent over the next few years. The students who do not graduate from high school in Canada are most likely to be young men who live in poverty outside large urban centers, and those who have disabilities and/or are visible minorities, including Aboriginal people (Canadian Council on Learning (CCL) 2007).

In England, the National Curriculum ends at age 16 when the vast majority of high school students take the General Certificate of Secondary Education (GCSE) qualifications, which depending on their success determines their educational choices post-16. In 2010, 69 per cent of students received an overall pass rate with a grade of C or better (Shepherd, 2010) – a much lower proportion than the OECD number reported earlier. In 2006, 77 per cent of 16- to 18-year-olds were in some form of education and training, leaving under a quarter not engaged in formal study (Hodgson & Spours, 2008).

Nearly all Finnish students complete their nine-year compulsory education, which ends with the completion of lower secondary school. Those students who do not complete their compulsory schooling on time can opt for one extra year in order to continue their studies at the upper secondary level. Approximately 3 per cent do so. Upper secondary school is based on courses with no specified year-classes and ends in a matriculation examination. Ninety-five per cent of Finnish students graduate from upper secondary school (OECD, 2010a).

As of April 2008, approximately 98 per cent of the Japanese students who graduated from the three year junior high school programme entered the three year senior high school programme. Ninety-three per cent of these students graduated from upper secondary education (grade 12). The retention or graduation rate for senior high school is about 97 per cent, with only 3 per cent dropping out of upper secondary since the 1960s (Fujita, 2010).

In 2002, 99.7 per cent of Korean middle school graduates (grades 7-9) continue to high school (grades 10-12), and 93 per cent graduated from upper secondary school (OECD, 2010a).

In New Zealand, there is a historic pattern of students leaving school before completing secondary school. For example, of all 14-year-olds in school in July 2001, 82 per cent remained in school at the age of 16 in July 2003. The retention rate for 17-year-olds was 58 per cent and for 18-year-olds, it was 14 per cent (International Review of Curriculum and Assessment Frameworks Internet Archive, 2009).

In the US, high school consists of grades 9-12. The national graduation rate in the US in 2006-07 (the most recent data available) was 68.8 per cent, one of the lowest among OECD countries (Akiba, LeTendre, & Schribner, 2007; Wittenstein, 2010). During the past decade, beginning in 1997, the graduation rate marginally improved in 36 states with 10 percentage points or more in three states - New York, Tennessee, and New Hampshire. Twelve states saw a drop of at least one point, with the largest decline in Clark County, Nevada, which had a graduation rate of 39.9 per cent (Wittenstein, 2010).

Curriculum

Table 4: Curriculum

Countries	Core Curriculum Subjects	New Competencies: Learning Skills	Additional New Competencies	Certification
Canada (Ontario)	English; French; mathematics; science; social sciences; arts; health and physical education; civics; career studies	responsibility; organization; independent work; collaboration; initiative; self-regulation	community service; equity; information technology; lifelong learning	Secondary School Diploma
England	English language; a modern foreign language; design and technology; information and communication technology; social sciences; arts; physical education and health	communication; information technology; application of numbers; improving own learning and performance; working with others; problem solving	equity; information technology	General Certification of Secondary Education (GCSE); GCE 'AS' Levels; GCE 'A' Levels; Introductory Certificates and Diplomas
Finland	mother tongue and literature; second national language; foreign languages; mathematics; sciences; religion; ethics; health and physical education; social sciences; arts; home economics; guidance	citizen skills; problem solving; critical, creative and innovative thinking; communication skills; time management; entrepreneurship; ICT skills; planning; creativity; leadership skills; media skills; long term thinking; reflection; health; community responsibility; good manners	lifelong learning; equity; information technology	Certificate in General Upper Secondary Education; The Certificate in Vocational Upper Secondary Education and Training; The Apprentice Qualification Certificate
Japan	Japanese language; social sciences; civics; mathematics; science; health and physical education; art; home economics; "home room" / "club activities"	problem-solving skills; communication skills; applying knowledge to daily life; independent individuals; foreign languages (English)	information technology; lifelong learning;	Certificate of Upper Secondary Education

Countries	Core Curriculum Subjects	New Competencies: Learning Skills	Additional New Competencies	Certification
Korea	Korean language; moral education; mathematics; social studies; science; physical education; arts; practical arts (technology and home economics); foreign languages (English)	talent; individuality; creativity; community contribution; civil consciousness	equity; information technology	Diploma of High School Education; College Scholastic Ability Test (CSAT); National Certificate (in the area of vocational their study)
New Zealand	health and physical education; arts; social sciences; technology; science; mathematics; language and languages	communication skills; numeracy; information; problem-solving; self-management; competitive skills; social and cooperative skills; physical skills; work and study skills	equity; information technology; life-long learning	National Certificate of Educational Achievement (NCEA); National Certificate in Computing or the National Certificate in Employment Skills
US	English; mathematics; social science; science; physical education and health	varies per state, but often includes: essential learning; thinking; communication; technology; interpersonal skills	community service; equity; information technology	High School Diploma

Essential Learning Areas (Core Curriculum) and Soft Skills

Most countries in this study have similar essential learning areas / core curriculum which require students to study the national language(s), mathematics, science, humanities and arts. Physical education is also usually part of the school week, although it is not usually part of the examination programme. Moral or ethics education is an element of education in most countries but is taught as a separate compulsory subject in Finland, Japan and Korea. Religious education is compulsory in England (although students may be exempt). Schools offer religious education in Canada, but it is optional for students, whereas religious education is banned in public-sector schools in New Zealand and the US.

Certification

Programmes of study in secondary schools can lead to different levels or kinds of qualification, and therefore grant access to different educational and employment opportunities. Requirements for different qualifications awarded at the end of secondary school vary, but for each requirement, virtually all countries identify subject, content and/or skill areas that are required. This usually consists of a combination of general study, including compulsory and optional examination and non-examination subjects, guidance and personal planning. All countries have struggled with organizing qualifications in ways that meet the needs of students with interests in higher education and in work; how to combine qualifications that are primarily academic and those that are primarily vocational remain an ongoing challenge everywhere. The relationship between these certifications and postsecondary entry is discussed later in this report.

In Canada and the US, individual provinces/states set requirements for high school graduation. These typically consist of a prescribed number of credits, specific courses, course grades (determined at the school level) and community service.

England does not have a diploma in the same way North American systems do, but instead has multiple kinds of qualifications. General Certificate of Secondary Education (GCSEs) and the General Certificate of Education (GCE) 'A' Levels are intended to offer a comprehensive preparation for employment and provide a route to higher education, but their value depends on the actual grades obtained in each subject. For many years, 'A' Levels have been the qualification for university entrance; these require two years of study following the GCSE exams. Various changes have been made in the 'A' Level system, such as adding subjects and adding half courses, but the basic approach has remained largely intact.

England has struggled much more with what to do with vocational education and qualifications, and has adopted various ideas none of which appears to have been very successful. Vocational Certificates of Education were redesigned to become GCE 'A' Levels in applied subjects. They aim to provide an introduction to a vocational area and encourage distinctive teaching and assessment approaches, within work-related contexts. The government also created a new diploma representing a blend of general education and applied work-related learning. The first diplomas were made available in September 2008 in five subjects: Construction and the Built Environment; Engineering; Society, Health and Development;

Creative and Media; and Information Technology. A further 12 diplomas will follow in other subject areas. Additional vocational qualifications in applied/vocational subjects include 'Introductory Certificates and Diplomas.' These are suitable for 16- to 19-year-olds, adult learners and pupils in the final years of compulsory secondary education (14-16 years). They are full- or part-time programmes of study, which aim to support employment or further and higher education. However, the main characteristic of this whole system has been frequent changes in qualifications, and the current British government is proposing further changes.

In Finland, there are four different certifications students can obtain at the end of upper-secondary school. The Matriculation Examination Certificate is dependent on successful completion of the syllabus and examinations in all compulsory and optional tests. The Certificate in General Upper Secondary Education is dependent on successful completion of the compulsory education syllabus and with the examination of core subjects and electives. Subjects in some areas are offered at different levels of difficulty. The Certificate in Vocational Upper Secondary Education and Training is a mixture of core general studies, electives and workplace training. The Apprentice Qualification Certificate is a 1-4 year programme (all others are 3-years in duration) that is also a mixture of core general studies, electives and workplace training.

In Japan, students receive the Certificate of Upper Secondary Education from the school principal with the grade based largely on teacher assessment. There is no external moderation. Postsecondary institutions set their own written entrance examinations and control their own admissions. Graduation certificates indicate the option chosen (general, vocational, or integrated), and the grade is awarded on a 1-5 scale, with 1 being a fail. The final certificate of graduation has no grades; it is either pass or fail. These certificates offer schools and students more freedom of choice so each student can individually develop his or her own interests. They are also accepted by employers.

Korean students who complete all of the required courses receive the Diploma of High School Education. Students who sit the nationwide, government-set, curriculum-based College Scholastic Ability Test (CSAT) receive this qualification, in addition to the Diploma. Students with a vocational concentration can take the national exams to receive a National Certificate in the area of their study.

In New Zealand, the National Certificate of Educational Achievement (NCEA) is the main senior secondary qualification. It is a standards-based assessment with varying levels of qualifications. National standards have been set in each area of learning. When students achieve these standards, they earn credits towards their NCEA qualification (at one of the levels offered). In principle, the standards do not have to be met through formal school programmes. In each area of learning, different aspects of skills, knowledge and understanding are assessed separately. Each aspect can earn a different number of credits. Consequently, the qualification is different for each student, showing a student's credits and grades for each national standard and their performance compared with all other students across the country. In school curriculum subjects, students can achieve a standard, or achieve it with merit or excellence. As well as working towards the NCEA, students can also accumulate credits towards individual

national certificates and national diplomas, such as the National Certificate in Computing or the National Certificate in Employment Skills.

New Competencies

The traditional academic curriculum and its corresponding skill set are not the only skills that countries are promoting. New areas of learning, such as information processing, thinking and communication skills, and inter- and intra-personal skills (including citizenship and character education) are being added to meet the expressed or perceived expectations of higher education and employment.

Learning Skills / Key Skills

Learning skills in Canada vary per province. In Ontario, for example, specific learning skills that secondary students are to learn throughout their high school years include: responsibility, organization, independent work, collaboration, initiative, and self regulation. The assessment of key competencies is based on inference from observation of performance rather than by measuring discrete essential skills outcomes. However, these learning skills are listed, graded, and reported on all secondary school report cards.

Key skills that are highlighted in English curriculum documents include: communication, information technology, application of numbers, improving own learning and performance, working with others, and problem solving. All six skills are included in the National Qualifications Framework (NQF). The key skills qualifications are offered at four levels (1, 2, 3 and 4) which correspond to the levels in the NQF. Assessment of the first three key skills occurs through a portfolio and a test. Students must pass both. The other key skills are assessed through a portfolio and optional questioning. The portfolio evidence must show how the candidate has applied his or her skills in an every-day context. All six key skills are assigned points that are measured on Achievement and Attainment Tables (Quality Improvement Agency, 2008).

In Finland, the Ministry of Education set a parliamentary committee in spring 2009 to formulate a proposal for national objectives for the new Basic Education Act. The Basic Education Act aims to include citizen skills needed in society and individual futures, while highlighting deeper learning goals and high-order skills. These include: Thinking Skills (problem solving, critical, creative and innovative thinking), Ways of Working and Interaction (communication skills, time management, entrepreneurship, Information and Communication Technology skills); Crafts and Expressive Skills (planning, creativity); Participation and Initiative (leadership skills, media skills, long term thinking); and Self-awareness and Personal Responsibility (reflection, health, community, responsibility, good manners). Legislation will be determined for this Act in the first half of 2011 (Ministry of Education and Culture, Finland, 2010).

Japan highlights “21st century skills” or “new competencies”, including problem-solving skills, communication skills, and applying knowledge to daily life and jobs. Creating “jiritsu-shita-kojin” (independent individuals) has long been a goal of Japanese education, as has been the need to

improve teaching of foreign languages, especially English. These skills are perceived as targets for achievement and international competitiveness, although it is unclear if they are formally assessed.

In Korea, the most recent curriculum, known as the Seventh Curriculum, aims to prepare students to meet the needs of a changing society that is knowledge-based and globalized. In order to meet this aim, the curriculum emphasizes alternative skills, such as talent, individuality, creativity of students, and student contribution to the development of the community on the basis of democratic civil consciousness. It is unclear if these skills are formally assessed.

The New Zealand curriculum specifies eight essential skills for students to develop throughout their schooling. These include: communication skills; numeracy skills; information skills; problem-solving skills; self-management and competitive skills; social and cooperative skills; physical skills, and; work and study skills.

The assessment of key competencies is based on inference from observation of performance in meaningful contexts rather than by measuring discrete essential skills outcomes.

As the US decides curriculum by state, learning skills and their corresponding assessment practices vary. However, some of the learning skills in many state curriculums do include: essential learning; thinking; communication; and technology and interpersonal skills.

Community Service

Community service is also part of some curricula. In addition to citizenship or moral education, some jurisdictions, such as Ontario (other provinces do not require this) and some states in the US require students to undertake additional community service to meet graduation requirements. While community service is not compulsory in many countries, it is increasingly being encouraged.

Lifelong Learning

Lifelong learning is also perceived as important. In many countries this is generally a postsecondary aspiration; however, in Canada, New Zealand and Finland it also includes high school. For example, in Canada, Learn Canada 2020 is the framework the provincial and territorial ministers of education - through the Canadian Council of Ministers of Education - use to enhance Canada's education system. It includes four pillars of lifelong learning, stretching from early childhood to adulthood. It also addresses pressing educational learning issues facing Canadians today. Similarly, in New Zealand, one goal of the curriculum is the development of knowledge, skills and attitudes to take responsibility for individual learning, and to provide students with satisfying and worthwhile experiences that will motivate them to continue learning throughout life. In Finland, lifelong learning is also integrated into education policy. Educational equity and a high level of education are provided to the population. In order to provide sufficient learning skills and opportunities, upper secondary vocational education, for example, is available for students at any age to train for a trade.

Information and Communication Technology

Although there is much discussion about the role of information and communication technology (ICT) in education, especially in light of the rapid growth in social media in technology-based communications, documentary evidence on the role of ICT in high schools around the world is not readily available. The OECD's *Education at a Glance, 2006*, reported that there are five or fewer students per computer at school in Canada, England, Korea, New Zealand and the US. In Finland and Japan there are 8 or fewer students per computer at school. Principals also reported on ICT available for instruction and the extent to which lack of access hinders instruction (although this may be more a matter of their varying expectations). In Canada, England and New Zealand a little over 40 per cent of principals reported a shortage of computers for instruction. Japan and Finland were slightly better with between 30-40 per cent of principals reporting a shortage of computers for instruction. Twenty-six per cent of US principals, and less than 10 per cent of Korean principals reported that instruction was hindered by a lack of ICT resources. Other aspects of technology, including the response of education systems to hand-held devices and social media are not documented, though anecdotally it is of increasing concern in all countries.

Equity

There are high levels of political commitment to social inclusion and equality of opportunity throughout the world, though the degree to which these are carried out in practice is another matter. For example, in Ontario, Canada, the provincial government has recently created an *Equity and Inclusive Education Strategy* (Ministry of Education, Ontario, 2009), setting an expectation that all students, parents and community members are respected and every student receives high expectations for learning in a safe and caring school community. England aims to give everyone the chance through education, training and work to realize his/her full potential and thus build an inclusive and fair society and a competitive economy. Finland has put into place policies and practices to promote equity, such as all children enrolling in comprehensive schools regardless of their socio-economic background or personal abilities and characteristics. All students also receive a free, two-course meal daily, free health care, transportation, learning materials and counselling in their own schools. Japan is taking a step toward global trends in social sensitivity. Gender and ethnic discrimination have become officially criticized in education and attempts to remediate it have been put in place. Korea's contribution to equality is in their investment in human capital and their investment in multiple pathways for student achievement in secondary school, be it academic or vocational. New Zealand fosters fairness, tolerance, self-reliance and informed participation in New Zealand society. Schools in the US are also aiming to support all students, including English learners, those with disabilities, homeless students, migrant students, Native American, rural, neglected, or delinquent students.

While governmental aims for equity are important, it is also important to measure equity. One way to do so is through international tests such as PISA. In the 2009 PISA report, equity is measured by the variation in student performance in relation to socio-economic background and also by the variation within and between schools. Home and family background exerts a powerful influence on student performance across countries. According to the 2009 PISA report

(OECD, 2010b) differences in students' family background characteristics explain up to 22 per cent of differences in student performance. However, there is wide variation in student performance explained by these factors in different countries. With the OECD average at a 14 per cent variance in student performance explained by students' socio-economic background, Korea (11%), Finland (8%), Canada (9%), and Japan (9%) have less inequity than the OECD average. The United Kingdom (14%), the United States (17%) and New Zealand (17%) fall either at or above the OECD average.

Variation in student performance within and between schools is also a measure of student equity. Variation in performance occurs between students who are attending the same school. These students may display different abilities, effort or are exposed to different learning opportunities. Variance between schools occurs by the way students are allocated to schools; the way schools are organized; and the cultural, economic and geographical differences between schools.

Table 5 shows the variances for the countries in this report (OECD, 2010b). This table shows that Korea, Finland and Canada had less variance in student achievement related to socio-economic status than did the other four countries, with Korea especially low and New Zealand the highest in the group.

Table 5: Variation in Performance Related to SES Within and Between Schools

Countries	Total variance as a proportion of the OECD variance	Variance within schools	Variance between schools
	100 (OECD average)	65% (OECD average)	42% (OECD average)
Korea	72	61%	34%
Finland	86	81%	8%
Canada	95	78%	22%
United Kingdom	105	77%	33%
United States	108	72%	42%
Japan	116	63%	58%
New Zealand	122	94%	32%

For all these countries, most of the variance in achievement related to SES occurs within schools, meaning that students do not tend to attend schools based on their socio-economic status. By contrast, the Netherlands only had 30 per cent of this variation within schools and 60 per cent between schools, showing that Dutch schools are very much divided based on SES. However even in this group, schools are least segregated by SES in Finland and Canada, and much more so in the US and Japan. In general, countries with more between-school variance tend also to have a greater overall effect of socio-economic status on student outcomes.

Curriculum Streams

In Canada and the US, policy makers are encouraging education to reflect the presumed link between employability, national productivity and international competitiveness. England and

New Zealand similarly desire to raise educational achievement so that it will improve the nation's competitiveness and quality of life, by producing a highly skilled, motivated and flexible labour market. In Japan and Korea, changes in education are intended to prepare students for the society they are to enter as adults. These countries now promote creativity, individualism and imagination as skills that are necessary for today's competitive world. In Finland the priorities in educational development are to raise the level of education among the population and labour force and to increase adult opportunities in education and training.

To achieve these goals, the main innovations have been the development of alternative and non-traditional courses to improve retention, to meet the needs of all students, and to facilitate their smooth progression from secondary school to tertiary education or employment. In some countries, such as England, Finland and New Zealand, students may obtain the same qualifications regardless of whether they attend a school or another education provider.

In Canada, the most commonly required secondary school subjects are "academic" subjects that are often required for acceptance into university and college programmes. Performing well in these courses opens the door to further education and is the basis of the stratification of students in and by secondary schools. While some schools concentrate on the core academic courses, others offer a wider choice in order to try to balance students' interests, equity and common learning. Typically, vocational and academic programmes are offered within the same secondary schools, but technical and vocational programmes can also be found in separate, vocational training centres. The latter vary in length from less than one year to three years, leading to diplomas and certificates. The Ontario government has also been implementing new programmes to support different pathways after graduation. These have included the expansion of cooperative education, e-learning, dual credits and the Specialist High Skills Majors (SHSM), which are providing learning in innovative ways.

In England, after the age of 16, students can attend upper secondary school that will lead towards various qualifications, both academic and vocational. Further education colleges offer courses leading to the above qualifications, and to a vast range of vocational education and training (VET) qualifications. Over the last decade, the British government has given particular attention to vocational training, though provision in this area remains complicated and fragmented. For example, in England, there are approximately 2,000 vocational qualifications for students under age 19, of which around half fall under the National Vocational Qualifications (NVQ) framework. NVQs are competence-based qualifications covering almost every industry and occupation and fall under two apprenticeship schemes. The main public providers for VET qualifications are further education colleges and sixth form programmes offered in schools or in colleges. Over the past five years overall VET student numbers have fallen but the number of apprenticeships has increased. Specialisation is currently being encouraged in secondary schools and there are further education institutions (age 16+) specialising in agriculture and horticulture, or art, design and the performing arts.

Finland has a dual system, with separate general and vocational schools that prepare students for tertiary education. After basic education, 95 per cent of school-leavers continue in additional voluntary basic education (2.5%), in upper secondary schools (54.5%), or in initial vocational education and training (38.5%). Vocational education occurs through 119 study programmes

leading to 53 different vocational qualifications. Vocational education is intended for people of any age (although mainly for those aged 16-25). Students can either follow the school-based education system, which means full-time studies for three years, primarily organised in classes and conducted on-the job or they may follow individual study plans. However, the system is not rigid. Students may attend both vocational and general (academic) secondary school at the same time and complete programmes at their own speed. For example, while upper secondary school usually takes three years to complete, it can be completed in two, three, or four years. This is because general upper secondary is mainly organised without division into grades and teaching is not tied to year classes, so students may proceed in their studies either as a group or individually. After completing general upper secondary education or vocational upper secondary education and training, students can apply for higher education.

Japanese upper secondary education consists of academic senior high schools (*kôto-gakkô*), colleges of technology (*kôto-senmon-gakkô*), special training colleges (*senshû-gakkô*), or miscellaneous schools (*kakushu-gakkô*). Academic courses are offered full-day, in the evening or through correspondence. Full-day courses last three years. These courses are taught in three streams: general, specialised and integrated courses. All of these courses prepare students to advance to higher education and those who intend to gain employment but have chosen no specific vocational area. Specialised courses are also offered at academic senior high schools for those students who have chosen a particular vocational area for their future career. These courses may include agriculture, industry, commerce, fishery, home economics, nursing and so forth. Integrated courses offer both general and specialised education together. Colleges of technology or professional training colleges accept students who have completed compulsory lower secondary schooling. They offer five-year programmes leading to the title of 'associate'. Special training colleges offer a variety of practical vocation and technical education programmes. Most schools are privately controlled. Other schools provide students with vocational and practical training such as dressmaking, cooking, book-keeping, typing, automobile driving and repairing, and computer techniques.

A central goal of Korea's curriculum policy is to promote individual career choice while meeting the goals of national and economic advancement. Some high schools in Korea are divided into specialty tracks that reflect student interest and a possible career path. There are high schools that specialize in science, foreign languages and art, which students can attend based on entrance examinations. There are also public and private high schools in Korea, both with or without entrance examinations that do not specialize in a field. These schools are more focused on sending their students to university. Vocational schools specializing in fields such as technology, agriculture or finance are also available, and many students are employed immediately after graduation.

In Korea, there are three year technical high schools designed to train the workforce needed in the industries through two years of schooling and one year of training. There is also a four year curricular connection project which connects secondary school to junior college. To make vocational high schools more attractive, in April 2007, the Korean government changed the name of vocational high schools to professional high schools. This change facilitated the entry of vocational high school graduates to colleges and universities; most vocational high school students do continue into tertiary education. General high schools cater to 64 per cent of

students, including specialized high schools for students who are gifted in the arts, athletics, foreign languages and science. Vocational high schools cater to 36 per cent of students, who normally go into employment. However, students from vocational schools are also continuing their studies in higher education. Students who have completed upper secondary school including academic, trade, industrial, miscellaneous or correspondence high schools, are able to go to any of the 10 or more postsecondary institutions. Postsecondary institutions include: cyber college and university, industrial university, junior college, technical college, university of education, among others (Lee, 2009).

In New Zealand, the National Qualifications Framework along with the National Certificate of Educational Achievement (NCEA) provides opportunities for students to combine studies in school, college and private institutions. Similar to England, the NCEA has no prescribed national courses, so schools may offer shorter courses, combine subjects and combine levels. National Certificates can now be obtained that consist of traditional courses in academic subjects, as well as alternatives, such as drama and automotive engineering that count towards the NCEA. Upper secondary school students in New Zealand may begin to specialize in vocational learning, are able to integrate vocational courses into a general programme or may work toward credit attainment in the tertiary education system. Students are able to take courses beyond the traditional school curriculum while remaining enrolled at school, and students are able to accumulate vocational credits in school or in a range of other learning settings, such as a polytechnic. Students are eligible to attain tertiary courses through the Secondary-Tertiary Alignment Resource (STAR). This programme enables secondary schools to purchase tertiary course provision for students. Students in New Zealand may also receive a National Certificate in Employment Skills that is awarded to people who have demonstrated competence in literacy, numeracy, and other personal and technical skills. This qualification accepts credits from both unit standards and achievement standards and is an option for those students who are following a vocational track. Students who want to study at a New Zealand university need to meet a University Entrance standard. They need to achieve minimum standards of Levels 1, 2 and 3 of NCEA. Tertiary technical and vocational programs begin with schools' bridging arrangements with tertiary providers. Tertiary VET is offered at a variety of postsecondary institutions, government training establishments, several universities and the workplace.

In the US, most high schools are considered comprehensive schools and have predominantly general academic courses and some vocational course options. Vocational education in the US, as in Canada, is primarily considered to be a postsecondary activity, however in some instances it may take the place of the final years of high school. While in some educational systems, vocational education prepares students for very specific occupations and teaches them detailed skills that are known to be needed for effective job performance, in the US, technical education often teaches general, overall principles rather than specific skills for selected occupations. Furthermore, institutionalized linkages between the formal educational system and the workplace are much less common in the US than in many other countries. US high school students who attend vocational programmes have poorer outcomes compared to graduates of the general track. In addition to vocational schools/programmes, some states have also introduced magnet schools, which offer a particular education philosophy, curricular speciality, or career pathway. Career academies are another fairly common educational

development in the US in the last 30 years. Career academies aim to prepare students for postsecondary education and employment. Career academies are organized as small learning communities and typically serve between 150 and 200 students from grades 9 or 10 through grade 12. Here they combine academic and technical curricula and work-based opportunities around a career theme (Kemple & Willner, 2008).

Accountability and Testing

Table 6: Accountability and Testing

Countries	Local/Provincial/National Exams	Tracking of results with no public reporting	Public Reporting of Results	School Evaluation
Canada	Different in each province, but almost all have testing in grades 3 and 6 or 4 and 8, and exams at the end of grade 12. Ontario: EQAO numeracy test (grade 9); Literacy Test (grade 10); PCAP (13; 15 years old); subject exams developed by each school	PCAP; report cards	EQAO Numeracy Test; Literacy Test; report cards	private schools (instruction only); inspection of public school premises; local school monitoring
England	Key Stage 3 (year 9); GCSE (year 11); AS-Levels; A-Level; Communication; ICT	report cards	GCSE examinations	national, external review
Finland	9 th grade assessment samples; Matriculation Exam	report cards; grade 9 final assessments	none	local assessments; international assessments and reviews; informal school audit (by request)
Japan	local prefecture exams, National Assessment of Academic Ability; upper secondary entrance exams	class assessments; report cards; National Assessment of Academic Ability	senior high school entrance examinations	centralized school evaluation
Korea	Scholastic Achievement Tests; entrance examinations	National Scholastic Achievement Tests; school assessment	Scholastic Assessment Tests	individual school evaluations
New Zealand	school-based assessment; NCEA	records of achievement	NCEA	external school review
US	state-wide testing (varies in each state; SATs (voluntary); ACT (voluntary); National Assessment of Educational Progress	report cards; state-wide tests (all states but different in each)	state-wide tests (some states); NAEP; SAT	national and local school evaluations

Assessment and School Examinations

In Canada, there are no national standards, qualifications, examinations, or awarding bodies for high schools as education is under provincial jurisdiction. Examinations are set, conducted and marked provincially or by individual schools in almost all subjects at the end of high school. Results from these are combined with assigned marks to determine the final standing of students. While individual schools set end-of-year exams, many provinces conduct province-wide standardized assessments for a specific year group. Ontario, for example, has a Grade 10 (age 16) Literacy Test that students must complete as one requirement of the Ontario Secondary School Diploma. This test is designed to ensure that graduates of Ontario's high schools have sufficient literacy skills. Grade 9 (age 15) students are also expected to take a numeracy standardised test administered by the Education Quality and Accountability Office (EQAO), an arms-length government agency that develops and implements assessment programmes in schools across Ontario. Canada also has a national assessment programme called the Pan-Canadian Assessment Programme (PCAP). This programme assesses a random sample of 13-year-old students across Canada in reading, mathematics and science but the results do not affect students' grades. It is also intended that 15-year-olds will be assessed in future years and that other subjects will be included in the programme as the need arises. Classroom assessment throughout Canada is the prerogative of teachers or, in some cases, school or district policy. In the classroom, there are typically on-going formative and summative assessments.

In England, assessments are carried out in Key Stages. Key Stage 3 covers ages 12 to 14. The assessment at the end of Year 9 is based on the National Curriculum, and is completed by classroom teachers. These results are not linked to any formal qualification or negative outcome for students. Key Stage 4 occurs at age 16, at the end of year 11 when students take a range of 8-10 subject examinations for the General Certificate of Secondary Education (GCSE). The National Curriculum culminates with the sitting of the GCSE; these assessments are devised and marked by external examination boards. GCSE results determine which course students will follow after age 16. If marks are low, students may leave secondary schooling or they may continue their education at vocational or technical colleges. If marks are high, they have the option of taking further secondary school examinations known as 'AS' Levels after an additional year of study or 'A' Level examinations, which are required for university entrance in the UK, after two years of study. Key skills qualifications in communication and information technology are assessed both internally, with students producing a portfolio of evidence demonstrating the application of the relevant key skill, and externally by tests.

In Finland, at the national level, samples of ninth-grade assessments are evaluated among a variety of other data (i.e., surveys) to determine equity and success of students. This is completed by collecting evidence of student learning through a variety of tasks, projects, and tests. School assessments are based on the curriculum objectives, how students have met those objectives and their progress in each subject. Students' knowledge and skills in each subject or subject group are assessed by the students' teacher or, should there be several teachers, jointly by the teachers concerned. The final assessment is carried out by the principal together with these teachers. At the end of general upper secondary education, students

usually take the matriculation examination, where all the subjects taught during the entire duration of high school are tested. During this examination, which rarely includes multiple choice questions, each student is required to participate in at least four tests in order to matriculate. More can be taken if desired. The only mandatory test is mother tongue, Finnish for most students. Examinations take six hours. Teachers grade the papers and send the graded papers to a national board, which then re-grades every paper. The exam mark may be appealed and may be re-examined. The result of the re-examination is final and cannot be appealed.

In Japan, promotion to the next grade level, which is practically automatic, is made on the basis of internal teacher assessment. Admission to post-compulsory upper secondary education (senior high school or similar; 15+) is granted on the basis of credentials from junior high school (internal teacher assessment and prefecture achievement tests), the results on the National Assessment of Academic Ability tests and high school entrance examinations. Local prefecture exams are a set of achievement tests which may cover Japanese, social studies, mathematics, science and English. The National Assessment of Academic Ability tests are also taken by all Year 9 children in public junior high schools and in approximately 60 per cent of private schools. This exam provides information on the levels of achievement and understanding of students in schools throughout Japan. There are also individual entrance examinations (the 'fourteen plus' exam) for post-compulsory upper secondary education in senior high school or similar, and students may choose to take one or more of these. In Japan, senior high schools often set their own written entrance examinations and control their own admissions. In some jurisdictions the public authorities may set the exams and allocate children to public senior high schools on the basis of the candidates' results; however, the entrance examinations for senior high school and higher education may not necessarily closely match the students' curricula in the previous phase. Once students enter upper secondary school, classroom assessments tend to be written, factual and in multiple choice format, rather than essay-type. Assessments are usually criterion-referenced relating to standards embodied in the course of study and norm-referenced involving a comparison of the performance of individuals with that of their peers, and reported to parents in terms of grades. There are no standard procedures laid down nationally as to how such grades should be derived or described.

There are various types of assessment systems in Korea, and they are predominantly norm-referenced. Assessments in Korea include the nationwide assessment system of national Scholastic Achievement Tests (SATs) for certain year groups and certain subjects, continuous classroom assessment by teachers, and entrance tests for high school education (though these are diminishing). Since September 2000, periodic national assessments of student achievement have been administered with a view to monitor the curriculum. Korean language, mathematics, science and social studies are assessed every two years (two subjects each year), while English communications skills and the use of information technology skills are assessed once every three years. The national assessment is a written test. Classroom assessment can take the form of written tests, oral tests, practical tests, or portfolio presentations. In the past, multiple-choice testing has been particularly favoured in Korea, but schools are now expected to try to balance assessments by putting more emphasis on such methods as essays or observations to assess expression, attitude and high-order thinking skills.

Schools are also expected to utilise practical assessment procedures to evaluate/assess experiments and workshop activities. Examinations to enter some upper secondary high schools also take place. In equalized areas (areas where schools are subject to the equalization policy that specifies that they must accept students randomly assigned to them in order to promote equality) students are allocated by lottery to schools within the school district of their residence. In the non-equalised rural areas and small cities where students are sorted among schools based on students' ability level, each school devises its own entrance examination for selection on the basis of competitive entrance. Some high schools use the information provided in the School Activities Record to select students from middle school graduates (aged 15). In addition, some colleges and universities use such information to compliment the entrance examination when selecting students. The School Activities Record, introduced by the Ministry of Education, Science and Technology includes: academic achievement level by subject; details of performance and anecdotal material; attendance and absenteeism; involvement in extra-curricular activities and voluntary service activities; special accomplishments and prizes won; notes on personality and conduct, and social and moral development; information on physical development; details of any awards; and details of any certificates received.

In New Zealand, assessment in secondary school includes both school-based assessment and external assessment against unit standards for the National Certificate of Educational Achievement (NCEA). School-based assessments are mainly written, but can include oral work (i.e., languages) and practical work (i.e., technology). The Ministry of Education has provided assessment tools for school-based assessment, including assessment resource banks, assessment tools for teaching and learning and national exemplars to assist teachers to make valid, reliable and nationally consistent judgements about the progress of their students. At the classroom level, these tools help diagnose student performance, give feedback about progress, and enable teachers and children to set goals for learning. At the school level, information may be aggregated and used to evaluate teaching programmes and inform strategic planning. The National Certificate of Educational Achievement (NCEA) offers one comprehensive qualification that is aligned with the New Zealand curriculum standards and provides a wide range of learning pathways and subject choices for students leading to one qualification. Examinations and assessments for the purpose of awarding senior secondary school qualifications are the responsibility of the New Zealand Qualifications Authority (NZQA). The NZQA is an independent body that administers qualifications developed by the Ministry of Education, oversees the examinations system, develops the National Qualifications Framework, and coordinates all qualifications in post-compulsory education and training. All marked examinations for the School Certificate are returned to students. Students also receive a results notice from the NZQA with the level they achieved. A Record of Learning is issued as is a record of all the standards the student has achieved. It is annually revised and updated. NCEA results are recognised by tertiary institutions and employers. For some purposes, internal results may be more relevant; for others, examination results may be more relevant.

In the US, assessment is primarily undertaken at state and local levels. All US states now have some state-wide testing in place to measure students' progress, along with some form of official curriculum documents and specific centralised learning standards for English, mathematics and science. In all states, mandated assessment of students through periodic testing assumes a

high profile, even though much of the day to day assessment of students' work at all levels is the responsibility of the school. As part of the admissions process for access to further and higher education in the US, most universities and colleges require scores from one of the standardised multiple-choice admissions tests such as the Scholastic Assessment Tests (SATs) and the American College Testing (ACT). The US also has a National Assessment of Educational Progress (NAEP). This test assesses a representative national sample of students in grades 4, 8 and 12 (aged around 10, 14 and 18 respectively). Regular (day to day) classroom assessment and testing of students often takes the form of tests at the end of a unit of study produced by individual teachers. Many course programmes are closely modelled on commercially published textbooks or work schemes. Textbook publishers provide tests with virtually all programmes, but there has been an expansion of options with portfolio, performance and project assessment.

Tracking and Reporting Progress

In Canada, most reporting of student outcomes is at the provincial level. All provinces have some form of reporting on various outcome indicators, drawn both from their various forms of provincial testing and from administrative data they gather from schools. For example, in Ontario, the results of the grade 9 numeracy test and the grade 10 literacy test are reported to schools, students and parents while school by school results are made public. In addition, a report card for secondary school students (grades 9-12) is issued four times per year. The report card presents percentage grades and the course median for each course to show how the student's achievement compares with that of other students taking the course. The report card evaluates students' learning skills such as teamwork, organisation and work habits, and homework. The report card also lists the total number of credits achieved towards the 30 required for graduation.

Because provinces have different data systems and indicators, it is often very difficult to report national data for Canada. The Pan-Canadian Assessment Programme (PCAP), which assesses a random sample of 13-year-olds every few years in reading, mathematics and science is the one national Canadian assessment, but Canada also includes provincial samples and data in international tests such as PISA or Trends in International Mathematics and Science Study (TIMSS), providing more cross-provincial indicators. PCAP results do not affect an individual student's academic record. They are reported for provinces and territories only, not for individual students, schools, or districts. The Pan-Canadian Education Indicators Program is a joint effort between the Council of Ministers of Education and Statistics Canada to report education data, including achievement results from PCAP, PISA and other sources, on a comparable basis across the country.

All publicly funded schools in England must keep educational records for every registered student. Schools are required to keep and update yearly curricular records, academic achievements, other skills and abilities, and progress in school. Schools must also send parents at least one written report every school year, concerning the student's progress in all National Curriculum subjects studied; progress in all other subjects and activities; an attendance record; National Curriculum assessment results and how these compare with results of students

of the same age in the school and nationally; and public examination results, including any vocational qualifications and/or credits towards these.

Targets of the National Curriculum are expected to be set by each school and are published on the following basis: the percentage of students aged 15+ expected to achieve grades A* to C and A* to G in five or more subjects in GCSE examinations, including English and mathematics, equivalent vocational qualifications, or a combination of both, and the average point score for the school to be achieved in GCSE and vocational qualifications. Tables are published that report the achievements and rates of attendance of 16- to 18-year-olds in schools and further education institutions. Public reporting of GCSE exam results also takes place. The national scores of those students writing the exams are reported. Students, at a charge, may access their marked GCSE examination papers if desired.

Finnish teachers are to provide students and their parents or guardians information concerning the individual students' schoolwork and progress of studies. The yearlong ninth-grade final assessments are given to the students through a numerical and descriptive score at the end. National performance assessments and audit are kept confidential, providing results only to the school that has been assessed and to their municipalities. Rather than a large-scale assessment system with high accountability, there is more of a process of external evaluation of the school system that is completed through sampling student and teacher work for quality assessments. The exception to this is the Finnish matriculation examination. The statistics generated from this exam are published by the matriculation examination board reflecting the national results but not individual, school, or local results.

In Japan, when students are tested in class, parents are informed of the test results, as completed test papers are sent home to them. Cumulative guidance records are also kept for each student in order to track their progress in school. The results of the National Assessment of Academic Ability (Grades 6 and 9) are intended to be used to assist the Ministry in planning policy and revising school curriculum guidelines. The results aim to help narrow the gaps between the schools. In Japan, scores from the senior high school entrance examinations are gathered and tabulated on a per centile basis. These scores are publically reported so each Japanese student knows where he or she is placed in comparison to others.

In Korea, the Student School Record/School Activities Record is updated frequently, but not reported. The results of school assessments are also not made public. These test scores are not intended to be made available to students or parents. However, individual test score reports from the SATs are delivered to individual students, as well as to the metropolitan and provincial education authorities (MPEAs) who publically report them.

New Zealand teachers have the primary responsibility for specifying practical arrangements, such as the timing of assessment activities, and for the way information is stored, analysed and distributed. Teachers are responsible for implementing, monitoring and reviewing the assessment and evaluation policy. Schools are required to maintain records which provide cumulative information on each student's school achievement. The records maintained within schools provide some of the evidence to inform decisions made by each school's board of trustees. At the secondary level, student data is collected through a Records of Achievement,

although this is not mandatory. A Record of Achievement provides a profile of the student. This record includes a listing of the credits gained by students through assessment against the National Qualifications Framework (NQF). It also includes a statement of the student's performance in national examinations and qualifications, a section on personal qualities, and a summary of involvement in school activities. The Record of Achievement can be used by the student for various purposes, such as seeking employment or pursuing further education and/or training. By contrast, the overall NCEA results, such as pass rates, are publically reported nationally and by school.

American schools are required to report to and consult with parents extensively. Students generally receive report cards two or more times per year. Report cards indicate the grades received in each of the subjects studied based on assessment of performance in tests, participation in class and completion of assignments. US states also use state-wide testing, where school performance is ranked. In some states this information is released publicly while in others, these reports are sent home. The National Assessment of Education Progress (NAEP) test results are reported for the nation as a whole, by region, gender, racial/ethnic group, parental education, community type and, on a voluntary basis, by state. Results of the main state-wide assessment programmes and SATs are aggregated at state, district and school levels. Public reporting of school and district performance in such tests occurs, although the reporting procedures vary in the style, format, detail and quantity of documentation. US school districts may also administer tests and report the results publicly on a school by school basis.

School Evaluation

School reviews or school inspections assess the performance of a school against a set of indicators. They measure both outcomes and the processes which drive them, which can help schools and systems identify specific areas which are in need of improvement.

In Ontario, Canada, the Ministry of Education inspects all private secondary schools that want to grant a secondary school diploma. However, the Ministry only inspects the standard of instruction, not items such as the premises, health and safety practices, or matters relating to staffing. No formal inspections of public schools occur through the Ministry; this is the responsibility of school boards. However as part of the Ontario student achievement strategies, the Ministry does monitor student achievement in key areas in all schools and districts and uses this information to work with districts around improvement plans.

In England, the Office for Standards in Education, Children's Services and Skills (Ofsted) is the agency that regulates and inspects schools. Ofsted inspects both state and independent schools, and all learning and skills providers in England. Inspections are generally two or three day visits that occur every three years, with two days notice before it takes place, although the frequency and intensity of the inspection regime has been changed several times since it began in the early 1990s. Ofsted focuses on school management effectiveness and the school processes to ensure high standards of teaching and learning. School leadership and management are expected to complete and be aware of the information in the Self Evaluation Form (SEF), which requires frequent reporting on the strengths and areas needing improvement in the school. Ofsted publishes each school's report on its website, along with comments and a

rating on a 4-point scale of the schools performance in each assessed area. Schools judged less favourably are inspected more frequently, and may receive little or no notice of inspection visits (Ofsted, 2010).

In Finland, there is no formal review cycle. Centralized school evaluations were discontinued in the 1990s. Now Finland relies more on analysis of local assessments, as well as international assessments and reviews to determine its educational strengths, needs and education policy development. Schools can request an informal audit of their school at any time to complement their own internal review processes, if desired.

The Japanese School Evaluation Act beginning in 2004 mandated that all the public schools must evaluate their own educational activities. Although the Ministry of Education provided a guideline for school evaluation in 2008, it only provided a vague outline for evaluation; no practical methods or tools were mentioned. As a consequence, the evaluation does not describe specific goals and lacks support with manuals and other staff support.

Both private and public schools in Korea receive school evaluations by central administration. These evaluations are based on student test scores, student learning outcomes and retention and pass rates of students. In 2009 at least half of all Korean teachers worked in schools where the school principal reported that they experienced at least an annual school evaluation (an external evaluation or a school self-evaluation). Three-quarters of teachers in Korea stated that the school evaluation had a high influence on the school budget, and 70 per cent of teachers worked in schools whose school principal reported that evaluations had a moderate or high influence on the assistance provided to teachers to improve their teaching skills (OECD, 2009).

In New Zealand, the Education Review Office, a state agency separate from the Ministry, conducts an external review on the performance of each school approximately every three years. This review judges compliance with legal requirements and national education guidelines. Although the role of the Education Review Office is to visit schools and evaluate their work, and the evaluations are public, the office has no power to require schools to change. That power rests with the Ministry which can close schools, suspend the boards of trustees and replace them with commissioners or impose requirements on how a school operates. This rarely occurs as the Ministry prefers not to interfere with any school. The Ministry holds schools accountable with the development of the planning and reporting policy for schools, required by the Education Standards Act (2001). Each school is to monitor performance against its charter and report annually to its community and the Ministry, including in its report an analysis of any variance between the schools' performance and the relevant objectives, directives, priorities or targets set out in the school charter (New Zealand Legislation, 2011d).

The US participates in school evaluations at the national and local levels. At the national level, the Nation's Report Card informs the public about the academic achievement of elementary and secondary students in the US. The Nation's Report Card uses periodic NAEP assessments in reading, mathematics, science, writing, US history, civics, geography and other subjects. This information is collected and reported at the national, state and local levels. School districts may also conduct their own school evaluations. The Long Beach United School District, for example, has a performance and evaluation system that relies heavily on communication and continuous

reflection. Principal performance is linked to school and personal goals established at the start of each school year, and evaluations include mid-year conferences and an end-of year evaluations. High-performing schools are awarded a large, painted star on the outside of their building to illustrate their achievement. Schools identified as “in need of improvement” receive an extensive data review and conferencing with school leadership, and may receive additional coaches or professional development. However approaches such as these are specific to each district.

Teachers and Teaching

Table 7: Teachers and Teaching

Countries	Pedagogy	Perception s and Status of Teachers	Teacher Qualifications	Teacher Recruitment	Teacher Evaluation	Teacher Professional Development	School Leader Preparation and Certification
Canada (Ontario)	no specific techniques; promotional teacher resources	Varies	Bachelor's degree; Education degree; no criminal record; tuberculosis test	varies. Ministry approved websites; individual school Board hiring	performance evaluation, not linked to pay	6 in-school PD days – 2 are mandatory; workshops; Additional Qualification courses linked to pay	Principal's Qualification Programme
England	no specific; promotional teacher resources	half of the public considered it to be an attractive career	32 different paths to teaching – but typically a Bachelor's degree PGCE; NQT; no criminal record; literacy, numeracy and ICT tests	local authorities teacher registration scheme and database; on-line schools recruitment service; individual schools; teaching agencies	performance evaluation, linked to pay	5 stages of PD all linked to the Professional Standards for Teachers	National Professional Qualification for Headship Programme
Finland	teacher centered; whole class learning	high status and respect	state numeracy, literacy and problem solving test; university tests; Bachelor's degree; Masters degree; school tests	recruited by municipalities	no teacher evaluations	3 days of mandatory in- service training; free continuing education	1. National Board of Education Certificate in Ed. Administration; 2. Principal Preparation Training Programmes; 3. Specialist Qualification in Management Programmes; 4. Professional Development Programmes, and; 5. Advanced University Studies
Japan	constructivist pedagogy; holistic approach to teaching; lesson study;	high status and respect	Bachelor's degree; Teaching certificate; prefecture examination	hiring varies by prefecture	self- assessment; performance evaluation linked to pay	long-term social experience training; short- term dispatch overseas; training	Principal Training Course

Countries	Pedagogy	Perceptions and Status of Teachers	Teacher Qualifications	Teacher Recruitment	Teacher Evaluation	Teacher Professional Development	School Leader Preparation and Certification
	classical approach to learning				and performance	for different years of experience; career guidance; graduate school study	
Korea	teacher-centered	high status and respect	Bachelor's degree; Teaching degree	employment examination; Ministry of Education and Human Resources Development	performance evaluation linked to pay and promotion	varies by age and type of school	Principal Training Programme
New Zealand	research-based techniques; teacher inquiry	low status compared to other professions	Bachelor's degree; Teacher Education Qualifications	individual Schools	performance evaluation linked to pay	varies per school interest, school budget, and location of school	National Aspiring Principals' Programme
US	varies - some districts have clear expectations and requirements; core common pedagogy; differentiated instructional strategies	Moderate—high ranking in esteem, but significant teacher turnover; teacher status can vary by state	Bachelor's degree with a certifiable teachable area; Education degree; practical experience; standardised teaching test; no criminal record; Masters degree (within certain number of years)	varies per state and district	varies – portfolios; performance evaluation linked to pay	varies per district	Standard Principal Certification

Pedagogy

In general, there has been much more attention to pedagogy in elementary schools than in secondary schools. Debates over methods of teaching mathematics, over the role of phonics, or over whole class teaching, have been primarily in elementary schools. Pedagogy in secondary schools has been the subject of less research and less policy.

In general, provinces in Canada do not prescribe particular forms of pedagogy, although curriculum documents often contain recommendations on appropriate teaching methods. Most provincial ministries of education have created teacher resources and provided professional development that promote particular pedagogical techniques, and several provinces have policies on student assessment that have implications for teaching (for example on providing students with second chance opportunities). Ontario has in recent years been more aggressive than most other provinces in promoting specific approaches to teaching. For example, *ThinkLiteracy* (2007), an Ontario Ministry of Education publication, is a resource that contains whole-school, cross-curricular approaches to literacy learning. These resources use research-based strategies to help students read, write and communicate orally. By focussing instruction before, during and after phases of learning and providing practical, hands-on, classroom-ready strategies applicable to all subject areas in grades 7 to 12, these resources expand teachers' instructional strategies. Much work has been done to develop and recommend (but not mandate) approaches to teaching in a variety of areas, almost always through working closely with skilled practitioners.

With the decentralized approach to education in England, teachers have considerable power to decide how they teach as long as they are following the National Curriculum (Alexander, 2004). However, Ofsted inspection protocols do look for subject-specific pedagogical approaches. On the other hand, the Department of Education, as of early 2010 does not appear to advocate or require any specific pedagogical approaches. The only three teaching techniques that are outlined in the Department of Education's "pedagogy and practice" include:

1. One-to-one Tuition, which provides individualized teaching for students who are not progressing in a whole-class setting;
2. Body language or non-verbal communication techniques that encourages concentration, invites student participation and gains student attention; and
3. "Making learning irresistible" by creating "fruitful" contexts for learning inside and outside the classroom (Department for Education, 2010b).

In Finland, the Ministry of Education considers teachers to be pedagogical experts and therefore they enjoy pedagogical autonomy in the classroom. However, empirical studies have reported that teachers in Finland appear to be pedagogically conservative. For example, Simola (2005) reported that pedagogical practices of Finnish comprehensive schools consisted of whole class teaching following what was written in the textbook. The pace of instruction was determined by the teacher and students sat in rows. There was little evidence of student-centered learning or

independent learning. By contrast, Berry and Sahlberg (2006) found that Finnish teachers were open to experiment with different teaching methods in class.

In Japan, pedagogical debates have also occurred around the difference between constructivist pedagogy and the classical approach to learning. In Japan, since the Yutori education reform beginning in the 1970s, constructivist pedagogy has been emphasized. For example, in Japan, there are a range of events and extracurricular activities that provide students with chances to participate in collaborative activities. There is also a holistic approach to teaching and learning that contributes to developing a learning and caring community. They have also introduced special lesson hours of comprehensive learning where school and teachers organize content and select relevant materials for exploratory learning or project learning. Lesson study (Jugyokenkyu), where teachers systematically and collaboratively conduct research on teaching and learning in classrooms in order to improve their teaching and enrich students' learning experiences, has also been quite popular in Japan. While lesson study can be done at any school level and in any subject area, it is least common at the high school level (grades 10-12). This is because Japanese secondary teachers do not teach all subject areas, like elementary school where lesson study is particularly popular. Instead, in high school, since the early 2000s, there has been a return to a classical approach to learning - an emphasis on basic knowledge accumulation and testing - despite the fact the basic policy has not been changed (Fujita, 2010).

Korean education is typically teacher-centered and the patterns of Korean teaching and learning have been shaped and reinforced by the competitive ethos (Morris, 1996). The teacher's word is considered law and students are expected to obey. Almost half of middle and high school students in Korea have reported having received corporal punishment (Sorenson, 1994). According to the national curriculum in New Zealand (New Zealand Ministry of Education, 2011e), research-based teaching approaches are promoted. For example, teaching as inquiry, which includes creating a supportive learning environment, encouraging reflective thought and action, facilitating shared learning, making connections to prior learning, providing opportunities to learn, and inquiry into the teaching-learning relationship in order to assess what strategy worked with different students, has been promoted. In addition, using teaching as inquiry in collaboration with purposeful assessment has also been perceived as part of the effective pedagogical strategy that New Zealand teachers are encouraged to use. However the decentralized education system in New Zealand does not prescribe teaching practices, though it may recommend some.

In the US, various award-winning districts have been noted to have similar pedagogical approaches. For example, both the Long Beach United School Board (LBUSD) and the New York City District of Education (NYCDOE) were found to have clear expectations and requirements for delivering and differentiating instruction to meet the needs of all students. In the LBUSD, a "core common pedagogy" that is grounded in the use of differentiated instructional strategies was adopted. These strategies include: active participation, classroom management, Bloom's taxonomy (higher order thinking strategies) and teaching to the objective. In NYCDOE, clear student expectations occur through differentiated instruction in all classrooms, where schools develop their own syllabi and instructional materials that best suit their needs (The Broad Prize for Urban Education, 2007). In both districts, schools use general guidelines and state standards to create a variety of instructional planning approaches and

coordinated student assessment. For example, in the LBUSD, teachers are required to identify strategies that will address the needs of students at different achievement levels. A district lesson template is provided, as there are specific components that must be addressed in each lesson plan. Teachers are provided with extensive training on lesson development, as lesson planning is linked to the teacher evaluation process.

Perceptions and Status of Teachers

In a 2007 survey on public education in Canada, Canadians in all regions are “very or somewhat satisfied” with teacher performance. Although satisfaction levels with teachers’ work is somewhat higher in the Atlantic (78%) and Prairie (76%) provinces, 70 per cent of Canadians agree that teachers are doing a good job (Canadian Education Association, 2007). While the general public perception of education is positive throughout Canada, the status of teachers varies by province. In Ontario, for example, the provincial government in power from 1995-2003 gave negative portrayals of the public education system and its teaching staff; this government ran advertisements that described teachers as overpaid and underworked (Gidney, 1999). Since 2003, Ontario’s provincial government has tried to increase public confidence in publicly funded education (Ministry of Education, Ontario, 2008) and its teaching staff.

In England, a survey on the status of teachers and the teaching profession showed that both inside and outside of the profession, about half (49% in 2003 and 47% in 2006) of the general public surveyed considered teaching to be an attractive career (Hargreaves, Cunningham, Hansen, McIntyre, Oliver & Pell, 2007). However, teachers and associated groups (teaching assistants, governors and parents) consistently perceived teaching as less rewarded, but more controlled and regulated than other high status professions. Both groups also perceived a steep decline in the status of teachers over the past four decades, starting from relatively high positions in 1967 of 4.3 (teachers) and 4.4 (associated groups), on a five-point scale, to 2.6 (teachers) and 2.9 (associated groups) on a five point scale in 2006. Furthermore, some teachers in subgroups including minority ethnic, early years, special educational needs (SEN), pupil referral units (PRU), and supply teachers, reported feeling some degree of marginalization within the profession. This had negative effects on their sense of status.

In Finland, classroom teaching is considered a high-status profession that attracts some of the best secondary school graduates. While many countries lack applicants for teacher training, in Finland, teaching has retained year after year its position as one of the most popular careers in terms of university entrance examinations (Jussila & Saari, 2000; Kansanen, 2003). According to a survey among candidates for the matriculation examination, as cited in Simola (2005), teaching was the number one career choice, overtaking traditional favourites, such as physician, lawyer, or engineer. The popularity of teaching may be attributed to the difficulty in securing such a position, the superior teacher education programmes, or the level of education teachers must obtain, since teacher salaries in Finland are not particularly high.

In Japan teachers are highly respected and teaching is perceived as a high status profession with job security and relatively high salaries (Watanabe, 2004).

In Korea, primary teachers are particularly esteemed as supply matches demand due to governmental control of entry. This is not true of secondary teachers, in which teaching programmes are oversubscribed. Supply does not match demand and without the confidence that there will be a teaching job when the teaching programme is completed, fewer high performing students apply. This has lessened the status of secondary teaching, and the attractiveness of this career choice has declined (Barber & Mourshed, 2007).

Teaching did not feature as a high status profession or occupation, according to a Hall and Langton (2006) study on perceptions of the status of teachers in New Zealand. Although teachers are recognised as well trained and highly skilled, and are seen as being influential on society, teachers ranked substantially lower than other high status occupations, such as law or medicine. The overall status rating for teaching was 6.8 (out of 10, with 10 being extremely high status) for the general adult population, 6.5 for youth and a significantly lower 5.8 for employers. However, a significant number of survey respondents indicated they were either teaching (14% of adults) or had considered teaching as an option (38% of adults). There is some indication that those who consider teaching do so often as a 'fall back' option.

In the US, teachers placed third after firemen and scientists (ranking slightly higher than military officer or doctor) as having an occupation of high prestige (Harris Interactive, 2007). Furthermore, judgements of 'very great prestige' for teachers have shown a consistent rise from 29 per cent to 47 per cent since 1977. However, with the rapid turnover of teachers and relatively low graduate salaries, the teaching profession is not necessarily a desirable career choice, despite having prestige. Initiatives such as 'Teach for America,' which target top graduates from top universities, are attempting to contribute to an upward cycle of desirability of the profession; although they are also controversial because they do not include significant formal training (Hargreaves, 2009).

Teacher Qualifications

In most provinces of Canada, teacher certification is handled through a provincial government department, but in Ontario and British Columbia certification is provided through a provincial College of Teachers. Typically, the requirement for a Canadian to obtain secondary school teacher qualifications is a Bachelor's degree with secondary teachable curriculum subjects plus a one or two year Bachelor's of Education degree or equivalent. Many provinces require that successful applicants complete criminal record checks, as well as verification that an employee is not listed in the Child Abuse Registry. Other requirements such as a tuberculosis test may be required.

To teach in England, teachers must gain Qualified Teacher Status (QTS). As of 2006, there were 32 different ways to enter the teaching profession in England (Barber & Mourshed, 2007); however, the most common path to teach in England is to complete a first degree (BA or B.Sc.) and then complete a Post-Graduate Certificate of Education (PGCE). After initial training, all newly qualified teachers (NQTs) must serve a one year induction period that must be passed in order to remain a registered teacher. Schools are obliged to provide guidance, support, and training to NQTs. Local education authorities are also obliged to provide professional development opportunities for NQTs. Teachers in independent schools are not statutorily

required to hold QTS, although it is preferred. Teachers are also required to complete criminal record checks. All teacher candidates in England must pass a skills test in literacy, numeracy and ICT before they can be recommended by their initial teacher training institution for the award of Qualified Teacher Status (Larsen, 2005).

Entrance to Faculties of Education in Finland is a multi-level process. First, candidates answer a state-run multiple choice assessment for testing numeracy, literacy, and problem solving (Barber & Mourshed, 2007). The students who obtain top scores move to a second round run by each individual university – many of which are well known by international comparisons and are distinguished by depth and scope. At the universities, applicants are tested on their communication skills, willingness to learn, academic ability, and motivation for teaching. These traits are assessed through tests, interviews and group work. At the end of this multi-level process, about 10 per cent of some 5,000 applicants are accepted annually into Finnish faculties of education (Sahlberg, 2007). This however does not necessarily lead to a teaching position. Finnish teachers must hold a Master's degree to become permanently employed, and in order to teach, further tests by individual schools are set for teachers to pass (McKinsey, 2007). Only once Finnish teacher candidates go through all of these processes are they able to teach.

In Japan, lower secondary school teachers study at universities or junior colleges. Upper secondary school teachers receive their undergraduate training at universities and are more likely to have a graduate degree. The board of education in each prefecture is responsible for awarding teaching certificates (Watanabe, 2004). Japanese teachers have either an Advanced, first- or second-class teaching certificate. Teachers are encouraged to work toward higher level qualifications by engaging in ongoing training. On completion of training, teachers in elementary and junior schools with a Bachelor's degree are awarded a first-class teaching certificate, and those with a junior college certificate are awarded the second-class certificate. At senior high schools, teachers with a Master's degree are awarded a first-class teaching certificate, and those with a Bachelor's degree a second-class certificate. After obtaining the teaching certificate, the final hurdle for a teacher at a public school is to pass an examination set by the prefecture to be appointed a teacher. Once this examination has been passed the teacher may work in any school in that prefecture. However, the license is only valid for one year and if they fail to find employment in that year, they have to take the exam again. If applying for a position at a private school, the school will set their own requirements for employment.

In Korea, secondary teachers are trained in both private and public comprehensive universities. There are three ways to become certified as a Korean secondary teacher:

1. Enrolment in a subject speciality in the college of education;
2. B.Sc. parallel enrolment in teacher certification programmes; and
3. Graduate schools of education.

Among these programmes, subject specialist departments in the college of education play a primary role in training the subject specific teachers.

To teach in New Zealand, there are a number of Initial Teacher Education (ITE) programmes that leads towards a teaching qualification at Level 7 on the NZQA Register of Quality Assured Qualifications. This qualification allows programme graduates to teach in New Zealand early childhood education (ECE) services, schools (primary, intermediate and secondary), or Kura (Māori medium or immersion schools). These programmes include:

1. An undergraduate degree that is 3 or 4 years in length;
2. An undergraduate diploma that is 3 years in length; or
3. A graduate diploma of one year's length following the completion of an undergraduate degree.

Teacher education qualifications are offered by a range of universities, wananga (a type of publicly-owned tertiary institution that provides education in a Māori cultural context), polytechnics and private teacher education providers, which offer options for part-time, distance, online, campus-based and specialist programmes. Regardless of the institution, ITE consists of a mix of curriculum, learning and pedagogical theory, professional studies, practicum experiences and cultural studies.

In the United States, certification is handled by each state's Board of Education, and requirements vary from state to state. Typically, a Bachelor's degree with a certifiable teachable area (i.e., math, science, English) is a minimum requirement, along with an education degree with practical field experience. Over 40 states currently employ some form of standardised teaching test. The vast majority use basic skills tests, followed by tests on pedagogical knowledge, general knowledge and subject matter. Many states also require that teachers pass standardized exams at the national and/or state level in the subjects they teach and the methods of teaching those subjects. Teachers in almost all states also complete either a content-based or teaching-based Master's degree within a stated number of years. Many states require that successful applicants complete criminal record checks.

Teacher Recruitment

Teacher recruitment practices in Canada vary by province and by district. For example, some school boards in Ontario recruit secondary teachers using Ministry of Education approved websites. These websites allow school boards to post career opportunities and receive applications for the jobs posted. Other districts may have their own hiring processes. Most hires for permanent and temporary teaching positions occur during the spring, with some in the fall to fill additional vacancies that may arise. In some cases principals play a central role in hiring, while in other districts superintendents screen submissions and choose who will be interviewed.

In England there are four main ways secondary school teacher recruitment occurs:

1. Many local authorities (LAs) use a teacher registration scheme and database. Prospective teachers fill out the application form and their details are made available to

head teachers with vacancies in their schools. Interviews are usually held at the school in which the vacancy occurs.

2. An on-line Schools Recruitment Service exists where jobseekers can register for free and receive vacancy alerts for their preferred role and geographic region. They can also choose to be a part of the talent pool, enabling schools to contact them directly.
3. Most schools use advertisements to recruit teachers. Various weekly publications are available that advertise teacher vacancies. Local authorities also usually advertise vacancies on-line. Prospective teachers can apply directly to the school, following the instructions in the advertisement.
4. Numerous private teaching agencies work directly with schools to provide fitting candidates for positions.

Finnish teachers are recruited and hired by municipalities and are considered highly qualified and committed from the start (Finnish National Board of Education, 2010).

Japan's recruitment of teachers includes screening tests. Although recruitment varies by prefecture, many local and regional boards of education examine academic performance, evaluate personality for characteristics such as versatility, and evaluate teaching experience. This evaluation is completed through interviews and practical exams that include subject-specific tests, trial lessons, and role playing (Ministry of Education, Culture, Sports, Science and Technology, Japan, 2010).

Recruitment and selection for Korean teachers for national and public secondary schools is highly centralized. All prospective teachers who have acquired a teaching certificate must go through a common examination administered by superintendents from all of the metropolitan and provincial offices of education. The employment examination is primarily a paper and pencil test. An evaluation of instructional skill and interview also takes place. Teacher assignment is completed through the Ministry of Education and Human Resources Development, metropolitan and provincial offices of education, local offices of education and schools, after the central Ministry has determined the teacher quota. In order to achieve equitable distribution of teachers among schools, appropriate assignment criteria are considered by way of teachers' instructional hours, number of teachers per class and the rate of securing the necessary teacher quota.

In New Zealand, schools are responsible for employing their own staff. There is not a central staffing agency or government department responsible for staff placement. Prospective teachers in New Zealand can apply to schools directly or through Ministry of Education approved teacher recruitment agencies that are free for teachers to use. However, in order to be eligible, prospective teachers must have their teaching qualifications assessed by the New Zealand Qualifications Authority for the purposes of teacher registration and starting salary. All secondary school teachers must also be registered with the Teachers Council before teaching employment. Once registration is completed, prospective teachers can apply for teaching positions in New Zealand. All vacancies are advertised in The New Zealand Education Gazette.

Teacher recruitment in the US differs by state and district with few standard practices. The Aldine Independent School District (AISD), for example, targets high quality candidates in three ways.

1. AISD has established partnerships with 32 of the top teacher preparation institutions across the country and approximately 25 per cent of new hires result from these partnerships.
2. AISD covers tuition for bilingual paraprofessionals who are working toward earning a teaching certificate.
3. The district offers “contracts” to Aldine high school graduates who are interested in becoming teachers.

Once Aldine graduates earn their teaching degrees they are guaranteed a job in the district.

Teacher Evaluation

In Ontario, Teacher Performance Appraisals (TPA) occur two times in the first twelve months of teaching, connected with the teacher induction programme. Teacher evaluations for experienced teachers occur at least once every five years in order to foster and encourage teacher development and growth, and identify areas where additional support is required. Experienced teachers are evaluated by the school principal on 16 mandatory competencies, based on the ‘Standards of Practice for the Teaching Profession.’ The overall performance is awarded a rating of unsatisfactory or satisfactory. The rating is not linked to pay, but rather the direction for professional growth (Ministry of Education, Ontario, 2010c). Unsatisfactory ratings may be the beginning of a process of dismissal.

In England, teacher performance appraisal takes the form of checklists and summary reports. At the conclusion of the process, a summative report is drawn up by the principal, signed by the teacher and forwarded to the local education authority. Appraisals in England are linked to teachers’ opportunities for career and pay advancement. Teachers who perform adequately can also be appointed to advanced skills teachers and/or head teachers if desired (Larsen, 2005). Most teachers who wish to do so can attain the status of ‘Advanced Skills Teacher.’

Finland does not conduct any formal teacher performance evaluations.

In Japan, some boards of education have started projects for the implementation of new assessment systems for teachers. For example, the Tokyo Board of Education implemented the Skill Building Performance Appraisal System in 2000. This appraisal system aims at developing the skills of teachers through self-assessment and performance evaluation. Evaluations are based on the set of objectives each teacher creates in accordance with the principles and policies that a headmaster makes. Based on these evaluations, headmasters or deputy headmasters give appropriate advice or instructions to teachers. Japan’s Ministry of Education is also urging the prefectural boards of education to improve and enhance teacher evaluation by constructing a new system in which the abilities and achievements of each

teacher are fairly evaluated, and decisions concerning promotion and salary appropriately reflect evaluation ((Ministry of Education, Culture, Sports, Science and Technology, Japan, 2010).

The Korean Ministry of Education is preparing to implement a new teacher evaluation system which will designate high-performing teachers and provide them with incentives including promotion and opportunities to study abroad. The system will also indicate which teachers require extra support (Lewis, 2009, October 12).

In New Zealand, a principal or one school board member is responsible for undertaking or supervising mandatory teacher appraisals. The policies and procedures for appraisal are typically developed in consultation with all staff; however, performance appraisals are related to the three levels of teaching (beginning classroom teachers, classroom teachers and experienced classroom teachers) and assess the nine dimensions of the professional standards (i.e., professional knowledge, professional development, teaching techniques, management of students, motivation of students, etc.). A written appraisal report is required for discussion and consultation with the teacher. Feedback is provided in a collegial manner in order to lead teachers to professional growth and increased pay. Teachers who demonstrate they have achieved the professional standards receive an annual pay increase. Each teacher participates in the appraisal process at least once within a twelve-month period. The results of this appraisal are confidential; however, they are reported to the school's board of trustees in general terms (New Zealand Ministry of Education, 2011f).

Teaching evaluations in the US are determined by state or district, sometimes through collective agreements. Connecticut, for example, has developed one of the most comprehensive teaching evaluations for new teachers. Over the first two years of a teacher's career, each teacher is expected to create a portfolio of documentary evidence of instruction, lesson logs, videotapes of classroom teaching, teacher commentaries, samples of student work, and reflections on their planning, instruction and assessment of students (Larsen, 2005). Yet, Connecticut's programme is not the norm across the US. Most states use standardised forms, checklists and summary reports for teacher appraisal. At the end of this process, a summative report is typically written by the school principal, signed by the teacher and forwarded to the school district. Performance appraisals for experienced teachers may be high-stakes and may be tied to salary, promotion and employment continuation. In Texas, for example, if an appraisal is unsatisfactory, principals create an intervention to address the areas where teachers need assistance, and another performance appraisal is carried out to ensure compliance (Larsen, 2005).

Professional Development

In Canada, professional development is decided provincially and in local jurisdictions. First, days are allocated for professional development under each province's legislation or regulations. For example, in Ontario, the Education Act states that school boards may designate up to six professional activity (PA) days per school year. Two of those PA days are mandatory and must address provincial education priorities outlined by the Ministry. These professional activities are devoted to professional learning aimed at improving student

achievement and closing the achievement gaps among students. Suitable topics may include: performing assessments and evaluations for and of learning; facilitating parental and community engagement; using data analysis to inform instruction; and developing and implementing board and school improvement plans (Ministry of Education, Ontario, 2010a). The remaining 4 days for professional activity are optional and topics are decided by individual school boards, though one day must relate to curriculum development, implementation and review. Second, local professional development in Canada varies by school board. Various activities are funded by school districts and held during school hours. In Ontario, 85 per cent of teachers take formal courses or workshops of some kind. In addition, teachers spend \$22 million dollars a year personally funding Additional Qualification (AQ) courses, a set of courses in particular content areas such as subjects or special education. These courses are recognized by the College of Teachers and are linked to salary. AQ courses can result up to 26 per cent more salary if a teacher has completed the maximum range of courses and has completed 11 years of experience (Ministry of Education, Ontario, 2004a).

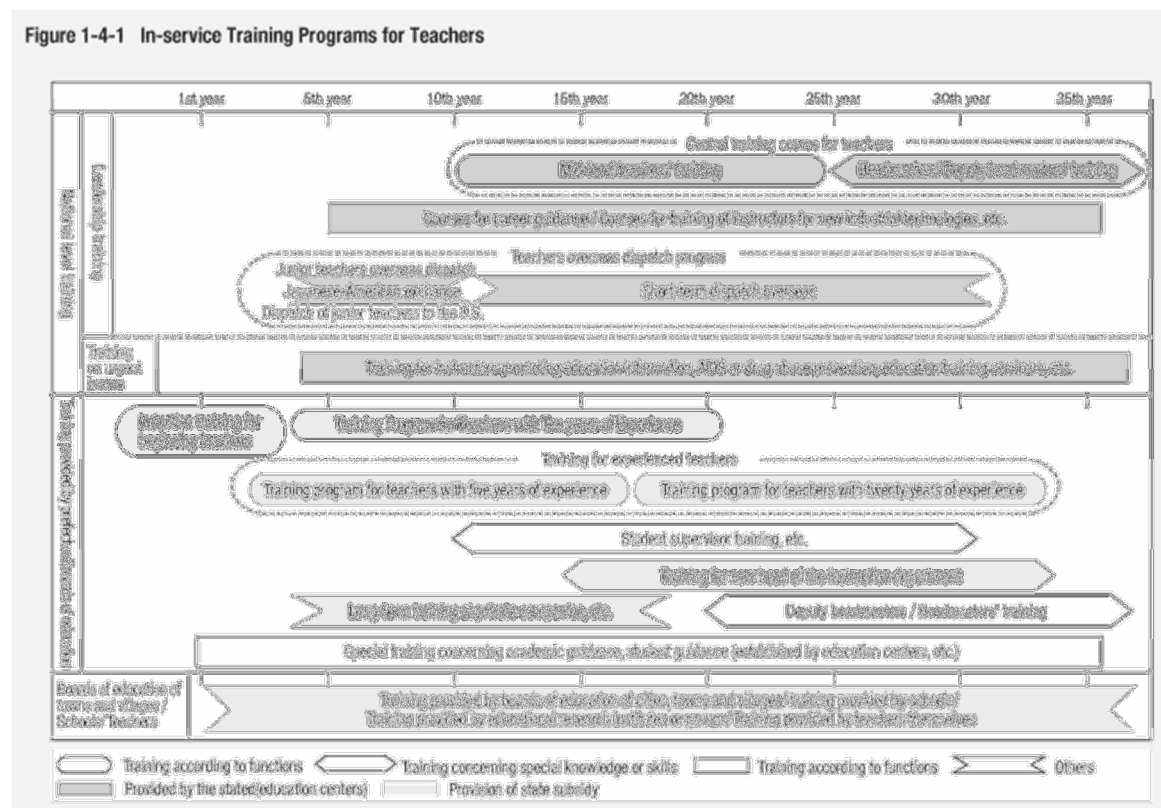
Since September 2007, professional development in England has been linked to the professional standards for teachers set by the Training and Development Agency (TDA). By following these standards and the professional attributes that are aligned with them, such as knowledge, understanding and skills, a teacher in England is expected to reach and maintain at least two of the five identified career stages (Evans, 2010). The first stage is qualified teacher status (QTS) and includes 33 standards that are expected to be gained by the end of pre-service training. These standards range from communicating with children, colleagues, and parents to knowing a range of approaches to assessment. Stage 2 consists of 41 core standards that teachers are expected to meet by the end of their professional induction period, which occurs in their first salaried position. Stage 3 is in the post-threshold stage. Attainment of this and each stage thereafter is optional but is dependent upon assessment of having reached the specified standards. Stage 4 is that of “excellent teacher” and Stage 5 is that of “advanced teacher.” Each involves specific leadership roles related to teaching effectiveness; however, these leadership roles are quite distinct from school management and administration roles. Furthermore, to proceed past Stage 3, teachers in England must now demonstrate - through an external TDA assessment process - that in their last two years’ performance management assessments they have met the required standards. Stages 1-3 are assessed by the head teacher (Training and Development Agency for Schools, 2007).

In Finland, teacher professional development is perceived as necessary to keep teachers knowledgeable of developments in professional duties. Finnish teachers participate in in-service training based on collective agreements with up to 5 workdays outside of school hours per year. This training is free of charge for teachers and they receive full salary during their participation. The responsibility of training, funding and providing the contents of professional development typically lies with local authorities. Typical in-service topics (based on collective agreements) include curricular work and subject specialties, pedagogical use of ICTs, and local topics of current interest. Teachers may also participate in additional continuing education and training, where they receive support for educational costs from their employers, although they may pay for a portion of the cost. This education may be taken during normal working hours, with the permission of each employer. The largest providers of continuing education and training include universities, polytechnics and the National Centre for Professional Development

in Education. Courses provided by these organisations usually consist of short courses lasting 1–5 days; less than 10 per cent of educational provision had a scope of more than 5 days (OECD, 2003). Information technology, subject-specific education and curricula were the most central themes in continuing education and training. Additional education may also be taken and privately funded, but the National Board of Education only monitors continuing education funded through the State budget. Research into continuing education and training is sparse in Finland.

In Japan, teachers are expected to improve their professional ability throughout their career. Japanese teachers are expected to have broad perspectives gained through various experiences. Prefectural boards of education are required to provide appropriate training opportunities for teachers, including: long-term social experience training; a short-term dispatch overseas; training for different years of experience; career guidance; etc. Table 8 provides more details ((Ministry of Education, Culture, Sports, Science and Technology, Japan, 2010).

Table 8: In-Service Training Programmes for Teachers in Japan



In addition, the Independent Administrative Institution National Center for Teachers' Training works to ensure that training is conducted in a comprehensive and integrated manner and offers leadership development as well as training on other educational issues. The Long-term Social Experience Training Programme is provided to teachers so that they can gain work experience

in private companies, social welfare facilities, social education facilities, and others for one month to one year. It has gained popularity in recent years across the country. Since 2001, Japanese teachers are also granted leave for graduate study.

Korea is one of the highest providers of teacher in-service compared to other OECD countries. The average number of professional development days for Korean teachers is 30 per 18 month period, though this varies by type of school and by years of experience (OECD, 2009). Korean teachers largely fund their professional development individually. As a result, Korean teachers have an average of 9 more days of professional development per year. Age of the Korean teacher also seems to be an indicator of the number of professional development days teachers take. For example, Korean teachers under 30 years of age receive 43.3 days of professional development. This number decreases with age, ending with 24.3 days of professional development for teachers aged 50 and older (OECD, 2009). Furthermore, the types of professional development undertaken by teachers (2007-08) widely varies, including: course and workshops (84%); conference and seminars (46.9%); qualification programmes (27.5%); observation visits to other schools (66.8%); professional development network (39.6%); individual and collaborative research (50.1%); mentoring and peer observation (69.4%); reading professional literature (52.5%); and informal dialogue to improve teaching (90%) (OECD, 2009). While this number and variety of professional development is high compared to other OECD countries, 48 per cent of Korean teachers wanted more professional development than they received, particularly with respect to their subject field, instructional practice, and student counselling. Many professional development activities take place during winter and summer breaks; only one-quarter of Korean teachers receive scheduled time to take part in development activities.

In New Zealand, professional development is funded centrally by the state and through individual school budgets. Centrally-funded professional development is arranged regionally through a contract-tendering process to provide schools with a number of professional development opportunities related to the National Standards. For example, schools are invited to send three school leaders to attend two half-day National Standards workshops in areas such as mathematics, reading or writing and assessment, or to one half-day university-run workshop on writing. Alternatively schools can choose to receive up to three hours of in-school support targeted at leadership teams. Additionally, schools deemed isolated have funding for three professional learning days per annum (per school) for the purpose of relieving teachers to visit other schools for professional learning.

Professional development in the US varies per state and per district. The Long Beach Unified School District, for example, has professional development that is strategically conceptualized. In the LBUSD, professional development is in alignment with district goals through two primary mechanisms: institutes or workshops throughout the year and school-embedded support through coaches and curriculum leaders to ensure consistency. The LBUSD also has a three-year, tiered programme that includes five days before a teacher begins teaching. New teacher training is designed to train teachers on core district practices and instructional and classroom practices. All new teachers are also provided a coach. A unique relationship with California State University at Long Beach also builds the capacity of potential teachers. A large number of district administrators teach at Cal State Long Beach and nearly 80 per cent of its new teachers

were educated at this university. As a result, before young teachers are even hired by the district, they have been trained in Long Beach's teaching.

School Leadership Preparation and Qualifications

To become a principal in a publicly funded school in Ontario, Canada, one needs an undergraduate degree, five years of teaching experience, certification in three divisions (primary, junior, intermediate, senior), two Specialist or Honour Specialist Additional Qualifications or a Master's degree, and the completion of the Principal's Qualification Programme. The latter is a centrally-designed programme offered by Ontario universities, teachers' federations and principals' associations, intended to provide educators with the knowledge and skills necessary to become effective school administrators (Ministry of Education, Ontario, 2010a). Additional development for principals may be offered by school boards, by the Ministry of Education or by the three principals' associations (Francophone, Catholic, Public) and can include: the Experienced Principal's Development Course (EPDC); Special Education for Administrators (SEA); and the International School Leadership Programme (ISLP). The EPDC, for example, provides opportunities for practising principals to explore components of their role in greater depth by reflecting on their experience, knowledge, skills and attitudes in dealing with issues related to managing and leading a school (Ontario Principal's Council, 2010). The Ontario Ministry of Education has a leadership development strategy that specifies priority areas of leadership development and that works with other partners to provide appropriate learning experiences.

In England, to become a headteacher, teachers must apply to the National Professional Qualification for Headship (NPQH) Programme. This is the mandatory qualification for school headship and is based on the National Standards for Headteachers. The NPQH is administered by the National College for School Leadership, a government funded institution that provides leadership development for schools. If an applicant is admitted into the programme, s/he will participate in this personalized programme that may last from 4-12 months, depending on individual development needs. The programme provides national learning materials, placements, coaching, online resources and local leadership development activities. Certification occurs with the successful presentation of a graduation assessment portfolio, and a successful panel interview conducted by headteachers. The National College for School Leadership offers a range of other training programmes for principals, while universities offer various graduate and certification programmes also intended for current or aspiring leaders.

There are various school leadership programmes in Finland, including:

1. The National Board of Education Certificate in Educational Administration;
2. Principal Preparation Training Programmes in some universities;
3. A Specialist Qualification in Management Programmes;
4. Professional Development Programmes; and

5. Advanced University Studies.

The Certificate in Educational Administration, for example, has a written exam based on statutes and topics in school administration. It consists of 12 credits (20-45 hours) of part-time studies. The part-time university-level Principal Preparation Programmes, by contrast, take 1-1.5 years of contact seminars, distance learning, projects and individual work. Some of these programmes are funded by the state and some require course and examination fees (Tarvainen, 2007)

The Ministry of Education, Culture, Sports, Science and Technology of Japan plays a role in supporting teacher training and school leadership training through the National Centre of Teacher Development (NCTD). Key training for school leaders is designed to allow deeper insight in the fields of school administration, comprehensive student guidance, curriculum management, moral education, career education, and other relevant school leadership issues. Training in comprehensive student guidance lasts 16 days, while other training sessions last 3-5 days. All the participants are required to stay on-site.

To become a principal in a Korean public school, a teacher must accumulate a variety of “points” in categories such as number of years at schools, performance evaluations, in-service training and research, service in remote areas, work experience in local educational offices, etc. (Kim, 2004). When teachers accumulate a certain number of required points, they are eligible to attend a principal training programme. After they successfully finish the programme and pass an examination, they receive a Principal Qualification Certificate. The position of principal is very competitive, so only a portion of those with the top scores are appointed. Private school principals must also earn a Principal Qualification Certificate from the government; however, test scores or total number of points do not determine who is appointed as principal since private schools have the right to appoint a principal on the basis of their own evaluation.

To become a principal in New Zealand, interested teachers first must apply to be accepted into the National Aspiring Principals' Programme (NAPP), a 12 month programme of professional learning, mentoring and school leadership inquiry. This programme, while developed nationally, is delivered regionally with local variations. The main aims of the NAPP are to inculcate the improvement of student outcomes in the daily practices of future school leaders, and to ensure there is a pool of quality aspirants to fill any vacancies. Once appointed, first-time principals are involved in an 18 month induction programme. This programme aims to increase educational leadership knowledge, skills, and influence in their current school context. The programme is delivered through residential courses, mentoring, online learning, self-assessments, and programme evaluations (Ministry of Education, New Zealand, 2011a).

In the United States, most states require public school administrators to be licensed by their state department of education. In Texas, for example, principal certification includes the successful completion of an approved certification programme for principals, the appropriate certification examination, two years of successful classroom teaching experience and a Master's degree. The Standard Principal Certificate that has been issued in Texas since 2000 requires individuals to renew the certificate every five years. Individuals renewing the Standard Principal Certificate must complete 200 hours of continuing professional education based on the

standards for the certificate, during the five-year period. Many states also require principals to have or obtain a Masters degree. Across the United States, universities as well as various private providers, are involved in professional development for school leaders (Texas Education Agency, 2001).

Educational Spending

Table 9: Educational Spending

Countries	% of GDP for all education	% of GDP for elementary and secondary	Public School Funding	Private School Funding
Canada	6.1% (2005-06)	3.6% (2005-06)	provincial grants with some use of local taxes	varies by jurisdiction – tax-supported; partial funding, no funding
England	5.6% (2010)	4.3% (2010)	local authorities from central allocations	independently funded
Finland	6.0% (2005-06)	3.9% (2005-06)	local authorities; government transfers	publicly funded
Japan	4.9% (2005)	2.9%	central government; local governments; tuition	central government; local government; tuition; school foundations
Korea	7.2% (2005-06)	4.3% (2005-06)	central government; local government; independent resources	central government; local government; tuition; school foundations
New Zealand	6.7% (2005-06)	4.7% (2005-06)	central government; local governments; independent resources	central government; tuition
US	7.1% (2005-06)	3.8% (2005-06)	federal; state; local sources	non-public resources – tuition; grants; fundraising; private donors

Education Expenditure as a Share of the Gross Domestic Product

In 2005-06, Canadian public expenditure on education from provincial, territorial, federal, and local governments amounted to \$75.7 billion spent on all levels of education, which represented 6.1 per cent of Canada's Gross Domestic Product (GDP). Of this total, \$40.4 billion was spent on elementary and secondary education, consisting of 3.6 per cent of Canada's GDP. Public

expenditure was 82.3 per cent of the total, with private spending at 17.7 per cent (Council of Ministers of Education, Canada, 2008; OECD, 2009).

In England, the Department for Education and Skills projected educational spending in schools to rise by 2.5 per cent per year in real terms (5.3 per cent in nominal terms) between 2007-08 and 2010-11. The goal (prior to the last election) was to bring the per-pupil spending in the state sector up to the level in the private sector, about £8,000 (Goodman & Siebieta, 2006). This would result in UK education spending moving from 4.7 per cent of the GDP in 1996-07 to 5.6 per cent in 2010-11, with 4.3 per cent allotted to primary and secondary education (BBC, 2007). The increase in spending is intended "to narrow the gap in investment per pupil between state and private schools" (BBC, 2007). However, these plans are now doubtful due to the change in government in 2010.

The OECD reported that the total expenditure on educational institutions in Finland as of 2005-06, as a percentage of the GDP for all levels of education is 6.0 per cent, and 3.9 per cent for primary and secondary education (OECD, 2009).

Japan's investment in education is lower than in many other OECD countries. As of 2005-2006, the share of Japan's public budget that is devoted to education is, at 4.9 per cent of the GDP (2.9 per cent primary and secondary education), one of the lowest among OECD countries (OECD, 2009). Unlike other countries, Japan's education budget has not been increased in recent reform strategies. As a result, parents bear heavy expenses in their children's supplementary classes, programmes, cram schools, preparation schools and private tutors. In a 2005 Japanese survey of 6th grade parents, it was reported that 90 per cent of parents send their children to a juku or cram school, and 65 per cent of these students attended four or more days a week (Child Research Net Cybrary, 2004).

The Korean government invested 7.2 per cent (4.3 per cent for primary and secondary) of the GDP to education in 2005-2006 (OECD, 2009). However, due to Korean parents' enthusiasm for education, it can be estimated that actual education spending is closer to some 15 per cent of the GDP. Similar to Japan, Korean parents heavily invest in supplementary classes, preparation schools and tutors. A report from the Korean Ministry of Education in 1998 estimated that Korean parents spent more than 9.6 trillion won (US \$8.06 billion) on tutoring. This equates to more than half of the Ministry's budget that same year (Cho & Yoon, 2005).

New Zealand spent 6.7 per cent (4.7 per cent for primary and secondary) of its GDP on education in 2005-2006 (OECD, 2009). As of 2010, the national budget will provide an extra \$1.6 billion for education over four years. This will fund a 4 per cent increase in operating expenditure for schools, but may not increase the share of the GDP.

According to OECD (2009), in 2005-2006 the US spent 7.1 of the GDP (3.8 per cent for primary and secondary) on education. Expenditure in the US varies more from district to district than is the case in the other countries in this report, due to the US reliance on local taxation to finance schools and inequalities in the wealth of local districts.

Funding Mechanisms and Funding of Private Schools

Canadian public funding for education comes either from the provincial or territorial government or through a mix of provincial transfers and local taxes. In the last two decades, school districts in most provinces have lost their authority to raise funds through local taxation. Provincial funding regulations are revised yearly and provide the funding for each school board based on factors such as the number of students, special needs and location. Funding of private schools varies across provinces. Three jurisdictions provide tax-supported separate school systems that include both elementary and secondary religious education for Roman Catholics or Protestants, when either group is the religious minority in a community. Six jurisdictions provide partial funding for private schools if certain criteria, which vary among jurisdictions, are met. No funding for private schools is provided in the other jurisdictions, although they still may be regulated. Altogether, publicly funded public and separate school systems serve about 93 per cent of all students in Canada (Council of Ministers of Education, Canada, 2008).

Schools in England are funded through local authorities from funds provided by central government and from local taxation. England's private schools are funded by charging tuition or from other resources, rather than relying on public funding.

Finnish education institutions - public or private - receive the same level of public funding. Responsibility for educational funding is divided between the state and the local authorities. The state subsidy averages 57 per cent of the costs of secondary education, while municipal contributions from various revenue sources amount to an average of 43 per cent (European Agency for Development in Special Needs Education, 2009). The State also supports local authorities by granting them increased state subsidies to assist with provision of special education.

Japan's public education funding is controlled by central and local governments, although tuition is still required in secondary schools for all students. Neither public nor private schools are free in Japan, although the cost of private upper-secondary schools, while partially funded by the government is about twice as expensive as the public system (Watanabe, 2004). The government is still discussing whether or not the national subsidy system, which transfers more of the tax-collecting authority from the central government to local governments, will be abolished in the future (Watanabe, 2004).

Public funding for Korea's public education comes from both the central government and the local government. The local government funds the secondary schools; however, 83 per cent of these financial resources are derived from the central government (Guo, 2005). The remaining funding comes from independent resources, mainly tuition. Funding for Korea's private education include support from national and regional entities and resources from school foundations, although reliance upon tuition is the most significant source of financing in private schools (Guo, 2005).

In New Zealand, state-owned schools receive full state subsidies and are regulated by the state. State-integrated schools are funded at the same per pupil level as state schools, and are subject to many of the regulations that apply to state schools. New Zealand's independent

schools or privately owned schools receive lower government funding and are subject to fewer regulations than state or state-integrated schools.

Public education in the US is provided by funding from three levels: federal, state and local. Although this varies by state, a large portion of school revenues come from local property taxes, which results in different public schools having widely varying resources per student. US private schools receive no public funding and must generate their own funding, which typically comes from a variety of non-public sources, including, tuition, private grants, fundraising from parents, alumni, religious bodies, or private donors.

Conclusions

This report is limited to considering aspects that can be compared based on readily available data. Some important elements of schooling, especially the internal dynamics of the school, are not included in these comparisons because good comparative data are not available. Still, comparing the more readily accessible features of the system also yields important findings because so much education policy does concentrate on these elements

So what can we say about high performing systems based on our evidence? This kind of documentary review does not allow us to derive firm conclusions so we express our comments as observations or suggestions for further inquiry.

The high performing systems discussed in this paper present different constellations or packages of characteristics. Some are centralized, some are not. Some focus greatly on examinations, some do not. Some seem to have intense pressure on students to perform while others do not. Some have larger private sectors, some smaller. And so on. One could not conclude, from these instances, that there is a recipe or a single recommended approach to better high school graduation rates.

Recipes do not work because each country's approach to education is so much a product of its history, culture and institutional structure. These impacts are most evident when one compares the Asian countries with North America. Very different ways of thinking about education, about authority relationships, and about the role of the individual and the society give rise to quite different approaches to education.

On the other hand, all systems share many attributes. Secondary schools serve the same general population in terms of age. They are organized into very similar structures of courses and subjects. They involve, as far as can be determined from the evidence reviewed here, rather similar pedagogy (i.e., students taking notes as teachers talk, or studying from textbooks). They are all centrally involved with allocating students to future opportunities for work and further education – although this happens in different ways in each country.

Particularly striking is the commonality in curriculum with its focus on traditional subjects despite rapid changes in knowledge. Secondary schools in all these systems, for example, still give much weight to mathematics and science, and very little to social science, despite dramatic changes in patterns of postsecondary enrolment (in which social sciences dominate) and in labour force requirements – which also, despite the rhetoric, involve only small numbers of people in work requiring science or anything beyond quite basic mathematics. Similarly, there is still relatively little room for students to express and follow their own interests, even though most will have to be doing that shortly after leaving secondary school.

The commonality of some features in systems with very different outcomes, and the variability in other features both suggest that structural aspects of these systems are not the main element that produces good results. In other words, it seems that countries can produce good results with more or less centralized systems, or with more or less demanding examination systems.

Features such as length of the school year or day, or the division into subjects, do not, based on this review, seem to matter very much – although they are the subject of much policy attention.

The values and history in each setting seem to matter more, yet though clearly important, they are also clearly not immutable. In each country they have changed over time, in some cases dramatically so. Finland changed its system quite dramatically a couple of decades ago, in particular moving away from a highly streamed approach, with very good results. Korea produced an amazing improvement in educational levels and outcomes over 30 years based on a huge investment across all levels of education. This suggests that the belief that education performance can only improve when broader cultural or economic factors change is not entirely true; a determined effort to improve education performance can be culturally transforming as well.

It is ironic that although high schools are deeply affected by the communities in which they exist, relationships between schools and communities do not appear to have played a large role in any of these systems. The data available here, though limited, suggests that in most places, schools remain fairly distant from the broader community. In most places students do not leave the school very much as part of their studies and curriculum remains primarily something disembodied, expressed in books and notes, rather than deeply connected to the way people actually live and work in the vicinity.

While improvement across entire systems is clearly possible, one of the interesting features of this analysis is that education policy typically does not focus on system-wide improvement. In only a few cases, such as in Ontario in the last few years, we can see a determined and comprehensive effort to improve outcomes across an entire system using a range of policy levers. More often systems appear to focus on one or two elements alone, whether examination systems, curriculum changes, or governance structures. Yet the evidence in this study, as well as other research (Levin, 2008; Levin & Fullan, 2008) reinforces the view that changing single components does not appear to yield the desired results. Improvement requires a system-wide effort, and a deliberate aim on the factors that actually change student performance, most of which appear to be located either in the broader society or in the specific practices of the school.

We conclude with some implications for Ontario from this study. These largely mirror the discussion above:

- There is reason to be optimistic about the possibilities for improving student outcomes in Canadian secondary schools based on the ability of other systems, and of Ontario in recent years, to do so.
- Although we can learn from other systems about areas that might be promising in our own setting, we should not copy particular policies or features directly from other systems because each feature is embedded in a larger gestalt.

- There is no evidence of a relationship between various structures of schooling (such as organization of the school year or day, or timetabling) and better outcomes, suggesting that a focus on structures is not the best route to improvement.
- Systems with strong links from schools to the labour market do appear to have better results from their vocational efforts; this is an area that could be developed further in Ontario.
- Being strategic about improvement as a systems feature seems to be important.

Much remains to be learned about effective secondary school practice in a comparative context. What we know today is that a range of different approaches can all yield good results if there is systematic effort and attention.

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