

(Final Version)

Personal, Social and Humanities Education Key Learning Area

Economics

Curriculum and Assessment Guide (Secondary 4 - 6)

Jointly prepared by the Curriculum Development Council and
the Hong Kong Examinations and Assessment Authority

Recommended for use in schools by the Education and Manpower Bureau
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Preamble

The Education and Manpower Bureau (EMB) stated in its report¹ in 2005 that the implementation of a three-year senior secondary academic structure would commence at Secondary 4 in September 2009. The senior secondary academic structure is supported by a flexible, coherent and diversified senior secondary curriculum aimed at catering for students' varied interests, needs and abilities. This Curriculum and Assessment (C&A) Guide is one of the series of documents prepared for the senior secondary curriculum. It is based on the goals of senior secondary education and on other official documents related to the curriculum and assessment reform since 2000, including the *Basic Education Curriculum Guide* (2002) and the *Senior Secondary Curriculum Guide* (2007). To gain a full understanding of the connection between education at the senior secondary level and the basic education level, and how effective learning, teaching and assessment can be achieved, it is strongly recommended that reference should be made to all related documents.

This C&A Guide is designed to provide the rationale and aims of the subject curriculum, followed by chapters on the curriculum framework, curriculum planning, pedagogy, assessment and use of learning and teaching resources. One key concept underlying the senior secondary curriculum is that curriculum, pedagogy and assessment should be well aligned. While learning and teaching strategies form an integral part of the curriculum and are conducive to promoting learning to learn and whole-person development, assessment should also be recognised not only as a means to gauge performance but also to improve learning. To understand the interplay between these three key components, all chapters in the C&A Guide should be read in a holistic manner.

The C&A Guide is jointly prepared by the Curriculum Development Council (CDC) and the Hong Kong Examinations and Assessment Authority (HKEAA). The CDC is an advisory body that gives recommendations to the HKSAR Government on all matters relating to curriculum development for the school system from kindergarten to senior secondary level. Its membership includes heads of schools, practising teachers, parents, employers, academics from tertiary institutions, professionals from related fields/bodies, representatives from the HKEAA and the Vocational Training Council (VTC), as well as officers from the EMB. The HKEAA is an independent statutory body responsible for the conduct of public assessment, including the assessment for the Hong Kong Diploma of Secondary Education (HKDSE). Its governing council includes members drawn from the school sector, tertiary institutions and

¹ The report is *The New Academic Structure for Senior Secondary Education and Higher Education – Action Plan for Investing in the Future of Hong Kong*.

government bodies, as well as professionals and members of the business community.

The C&A Guide is recommended by the EMB for use in secondary schools. The subject curriculum forms the basis of the assessment designed and administered by the HKEAA. In this connection, the HKEAA will issue a handbook to provide information on the rules and regulations of the HKDSE examination as well as the structure and format of public assessment for each subject.

The CDC and HKEAA will keep the subject curriculum under constant review and evaluation in the light of classroom experiences, students' performance in the public assessment, and the changing needs of students and society. All comments and suggestions on this C&A Guide may be sent to:

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Acronyms

C&A	Curriculum and Assessment
CDC	Curriculum Development Council
EMB	Education and Manpower Bureau
HKALE	Hong Kong Advanced Level Examination
HKCEE	Hong Kong Certificate of Education Examination
HKDSE	Hong Kong Diploma of Secondary Education
HKEAA	Hong Kong Examinations and Assessment Authority
HKSAR	Hong Kong Special Administrative Region
IT	Information Technology
KLA	Key Learning Area
PSHE	Personal, Social and Humanities Education
S1/2/3/4/5/6/7	Secondary 1/2/3/4/5/6/7
SBA	School-based Assessment
SSCG	Senior Secondary Curriculum Guide

Chapter 1 Introduction

This chapter provides the background, rationale and aims of Economics as an elective subject in the three-year senior secondary curriculum, and highlights how it articulates with the junior secondary curriculum, post-secondary education, and future career pathways.

1.1 Background

The senior secondary Economics curriculum framework was formulated alongside *The New Academic Structure for Senior Secondary Education and Higher Education—Action Plan for Investing in the Future of Hong Kong* (EMB, 2005) and the *Senior Secondary Curriculum Guide (SSCG)* (CDC, 2007). These two documents provide the overall direction for the development of senior secondary education in Hong Kong. They stipulate a combination of core and elective subjects, Applied Learning courses and other learning experiences to suit students' interests and aptitudes.

Economics is one of the six elective subjects in the Personal, Social and Humanities Education (PSHE) Key Learning Area (KLA) in the three-year senior secondary curriculum. The study of economics helps students to understand the human world through enquiring into how resources are used to serve individuals and society. It also contributes to the development of critical thinking and decision-making skills, which are crucial for the all-round development of students and, in particular, their development as life-long learners and responsible citizens.

The senior secondary Economics curriculum is designed to be a three-year elective course for all senior secondary students interested in the subject. The Secondary 4 - 5 Economics curriculum implemented in 2003 is the basis for the design of the curriculum, with some reorganisation of content, broadening of coverage and increased depth.

1.2 Rationale

Economics helps students to understand the principles and forces that affect people in their everyday lives, in particular their roles as consumers and producers. The perspective it provides is also important in giving students a more comprehensive understanding of contemporary issues facing Hong Kong and the mainland, as well as of the interdependence

among regions and countries. As Hong Kong is undergoing rapid economic changes, establishing closer links with the mainland and striving to remain competitive in the world economy, the study of economics is highly relevant and applicable to real-life situations.

The study of economics helps students to develop essential skills for “learning to learn”. The analytical approach of the subject enables students to learn to think logically. As students learn to apply theories and concepts to real-world issues, their problem-solving and critical thinking skills are enhanced. These skills are essential for life-long learning in a variety of fields of study, and for preparing to live in a knowledge-based society. Students of Economics will also learn to master a variety of tools and skills for the effective communication of economic ideas and discussion of economic issues.

The Economics curricula in Hong Kong secondary education have a strong tradition in positive economics, which emphasises its objective and scientific nature. This curriculum goes further and encourages students to formulate and explore normative questions. As an area of study in which the making of choices is prominent, economics has much to contribute to enquiry into issues that involve values and preferences. When students investigate controversial issues, they will learn to draw conclusions based on logical analysis, and at the same time be aware of the value judgments underlying the choices they make. Such analytical power and awareness are essential for making reasoned choices, as well as for developing intellectual capacity in general.

By developing students’ basic economic knowledge and skills, and an awareness of different values, the curriculum will help them to make rational economic choices for their own lives and decisions on various social issues. The curriculum will also help to develop in students a concern for the well-being of the family, society, the nation and the world.

1.3 Curriculum Aims

The aims of the Economics curriculum are to enable students to:

- (a) develop an interest in exploring human behaviour and social issues through an economic perspective;
- (b) understand the world in which they live through mastery of basic economic knowledge;
- (c) enhance their general intellectual capacity for life-long learning, through developing their capacities in economic analysis, so that they possess the skills necessary for reasoning about issues and making rational choices; and

- (d) participate as informed and responsible citizens in the decision-making processes of a modern democratic society.

1.4 Curriculum Objectives

1.4.1 Knowledge and understanding

Students will develop knowledge and understanding about:

- (a) economic terminology and concepts, as well as elementary economic theories;
- (b) basic economic problems faced by every individual and society, and alternative approaches to tackling these problems;
- (c) the considerations and forces underlying the economic decisions that need to be taken by individuals, firms, institutions and governments;
- (d) the interactions of different economic sectors; and
- (e) the Hong Kong economy and its relationship with the economies of other parts of the nation and the world.

1.4.2 Skills

Students will develop skills to:

- (a) interpret economic information presented in verbal, numerical or graphical form;
- (b) apply their economic knowledge to a variety of problems and issues in a range of economic contexts;
- (c) analyse information through the use of economic concepts and theories;
- (d) evaluate information, arguments, proposals and policies from different economic perspectives and make informed judgements; and
- (e) communicate economic ideas and informed judgements, in a clear, logical and appropriate form.

1.4.3 Values and attitudes

Students will develop values and attitudes so that they may:

- (a) participate as informed persons in the discussion of economic issues and decision-making; and
- (b) become active and responsible citizens and contribute to the well-being of the local community, the nation and the world.

1.5 Broad Learning Outcomes

By the end of the course, students are expected to become economically literate decision-makers and should be capable of demonstrating the following:

- (a) an understanding of scarcity, choice and cost as the basis of economic problems;
- (b) an ability to relate the role of specialisation and exchange to productivity growth in an economy;
- (c) an understanding of how decisions concerning production, exchange and consumption, and the associated coordination problems, are tackled by price and non-price methods of allocation, and the implications of these methods of allocation;
- (d) proficiency in applying the basic demand-supply model to explain real-world events and, through extending these analyses, to study efficiency by using consumer surplus and/or producer surplus;
- (e) an ability to interpret fluctuation in output, employment and general price level in the economy using the aggregate supply-aggregate demand (AS-AD) framework and the Quantity Theory of Money;
- (f) an appreciation of the connection between the learner and his/her social environment at present and through time, developed through understanding various economic agents, events, institutions and rules;
- (g) an ability to collate economic data and their different representations (e.g. graphs) to examine and interpret evidence to explain social patterns and events with the use of economic tools of analysis;
- (h) competence in generic skills such as communication skills, problem-solving skills and critical thinking skills through enquiry into economic issues and controversies; and
- (i) an orientation to and competence in using information and communication technologies for enquiry learning and knowledge construction.

1.6 Interface with Junior Secondary Education and Post-secondary Pathways

The study of senior secondary Economics curriculum is built on the knowledge and skills that students have developed in the junior secondary education. These include the concepts and knowledge embedded in the six strands of the PSHE curriculum. More specifically, Strand 5, “Resources and Economic Activities”, gives a solid foundation for students to extend their enquiry in the senior secondary Economics curriculum. They should have developed a preliminary understanding of elementary economic ideas and a general impression of the Hong Kong economy. Students should have the knowledge about the economic

restructuring of Hong Kong and its ties with the mainland through, for example, the Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA), and the implications of these developments for young people's career opportunities. They should also have acquired basic enquiry skills through project learning, which is one of the four key tasks to help students to learn how to learn, in their study of different areas of humanities. Together with other learning experiences in junior secondary education, students should have acquired key concepts and developed generic skills, such as communication skills and numeracy skills, to support them in the study of senior secondary Economics curriculum.

The study of this curriculum helps to foster students' intellectual power, and develop their economic perspectives that will benefit their further studies in tertiary institutions. This curriculum will provide a useful preparation not just for studying economics but also for other university studies such as management, financial studies, law, environmental studies, and public and social administration. The perspectives, knowledge base and skills that are emphasised in senior secondary Economics curriculum can broaden the range of further study choices for students.

This curriculum blends well with courses which prepare students with practical skills for employment in the service sector. Students taking Applied Learning courses together with Economics in S4 – S6 are adequately prepared for this pathway. Alternative avenues such as sub-degree programmes and qualifications offered by professional institutions in their respective fields also exist.

On completing senior secondary education, some students will enter the workplace directly. Their economic literacy, awareness and ability to make informed decisions will help them to cope with the demands of an ever changing work environment.

Chapter 2 Curriculum Framework

The curriculum framework for Economics embodies the key knowledge, skills, values and attitudes that students are to develop at senior secondary level. It forms the basis on which schools and teachers plan their school-based curriculum and design appropriate learning, teaching and assessment activities.

2.1 Design Principles

The design of this curriculum is based on the following principles which are derived from those recommended in Chapter 3 of *The New Academic Structure for Senior Secondary Education and Higher Education—Action Plan for Investing in the Future of Hong Kong* (EMB, 2005), namely that this curriculum should:

- (a) build on the knowledge, skills, values and attitudes, and learning experience which have been acquired and developed by students through their study of the PSHE curriculum in basic education;
- (b) achieve a balance between breadth and depth in the study of economics to facilitate students' preparation for further studies, entry into the workforce and whole-person development;
- (c) achieve a balance between the learning of theoretical knowledge and its application to real-life situations. Equal emphasis should be given to the development of systematic and conceptual knowledge in economics, and a better understanding of economic issues and problems relevant to the present and future lives of students;
- (d) provide a flexible and diversified framework which is capable of catering for learner diversity in abilities, needs and interests. The choice of curriculum elements should lead to effective learning for all young learners in the Economics classroom, so that success in learning can be realised for everyone;
- (e) help students to develop independent and life-long learning skills by promoting student-centred enquiry;
- (f) encourage the exploration of social issues. The inculcation of values, a variety of perspectives and empathy should be emphasised in this curriculum; and
- (g) align curriculum and assessment closely, with assessment designed as an integral part of the process of learning and teaching.

2.2 Curriculum Structure and Organisation

The curriculum framework and content are developed on the basis of the Secondary 4 - 5 Economics curriculum implemented in 2003, with a suitable restructuring of topics, broadening of coverage and increased depth.

Economics provides an interpretive framework for students to see the world in a more systematic way. This will equip learners with a range of tools of analysis through which they can comprehend realities better. With the addition of some normative issues in the curriculum, empathy, sensitivity and multi-perspective thinking of learners can be more readily enhanced. The preparation for future challenges can be more effectively achieved.

The components, concepts and tools of analysis in this curriculum are outlined below:

- (a) This curriculum comprises two parts. The Compulsory Part covers basic concepts and topics in microeconomics and macroeconomics. The Elective Part, which constitutes 10% of curriculum time, comprises two parts from which students choose one. The Elective Part includes elements that call for extended analysis and broader economic knowledge. It provides an opportunity for students to choose an area of study related to their aptitudes and interests.
- (b) The senior secondary Economics curriculum incorporates microeconomic core concepts and skills for the analysis of choice, such as cost and value, production and consumption. Specialisation as the basis for trade is discussed. Marginal analysis is introduced in the topic on firms and production, although the treatment is very elementary. Price mechanism as one of the most important resource allocation mechanisms is introduced. Efficiency is then discussed so that students can have a more in-depth understanding of real-world issues with the help of the concepts of consumer and producer surplus. Equity, a concern that surfaces in many real-world issues, is then introduced through the discussion of income inequality. This concept is useful for the analysis of cases, social problems and controversies. The framework of analysing choice is central to the microeconomic topics of this curriculum, and how a social system influences human behaviour through the shaping of incentives is embedded in this framework.
- (c) The performance of the economy has impact on the individual. This curriculum prepares students to understand the macroeconomy. To achieve this, elementary macroeconomic models and tools are introduced. For the analysis of aggregate economic performance, the AS-AD approach is adopted. Students can use this tool to

study factors affecting short term economic fluctuations and the effects of government policy on the economy. Also, the Quantity Theory of Money is brought in to explain inflation. The inclusion of these explanatory tools enables students to analyse the macroeconomy more comprehensively. Finally, the theory of comparative advantage is introduced to explain gains from trade.

- (d) As for the Elective Part, Part 1 extends students' understanding of the topic on monopoly by introducing more advanced analytical tools, and broadens students' knowledge about competition policy. Part 2 extends students' understanding of trade theory with the use of production possibilities frontier, and broadens their knowledge about economic growth.

The Compulsory Part and Elective Part of the curriculum are described below:

2.2.1 Compulsory Part

	Topic	Key Points
A	Basic Economic Concepts	Economics as a social science
		<p>Scarcity, choice and opportunity cost</p> <p>(i) The source of economic problems: scarcity</p> <ul style="list-style-type: none"> • Unlimited wants and limited resources • Free and economic goods <p>(ii) Choice and opportunity cost</p> <ul style="list-style-type: none"> • Economic decisions involving choices among alternatives • Concept of cost in economics • Interest as the cost of earlier availability of resources
		<p>The three basic economic problems</p> <p>(i) What to produce? How to produce? For whom to produce?</p> <p>(ii) How society tackles the basic economic problems</p> <ul style="list-style-type: none"> • By society's customs and traditions • By government decisions • By the market mechanism <p>(N.B. Illustrations by examples only. All theories on types of economic systems NOT required)</p> <p>(iii) Private property rights and its importance in a market economy</p>
		<p>Specialization and exchange</p> <ul style="list-style-type: none"> • Exchange as a condition for specialization <p>Circular flow of economic activities</p> <p>(i) Consumption of households and production of firms</p> <p>(ii) The relationship among production, income and expenditure</p>
		<p>Positive and normative statements</p> <ul style="list-style-type: none"> • Distinction between positive statements and normative statements

	Topic	Key Points
B	Firms and Production	<p>Ownership of firms (N.B. Firm as a unit that makes decisions regarding the employment of factors of production and the production of goods and services)</p> <p>(i) Forms of ownership</p> <ul style="list-style-type: none"> • Public ownership • Private ownership: sole proprietorship, partnership and limited company (N.B. Classification of partnership NOT required) <p>(ii) Limited and unlimited liability</p> <p>(iii) Shares and bonds as sources of capital (N.B. Classification of shares and bonds NOT required)</p>
		<p>Types/stages of production</p> <ul style="list-style-type: none"> • Primary, secondary and tertiary production and their inter-relationship
		<p>Types of goods and services produced</p> <p>(i) Producer and consumer goods</p> <p>(ii) Private and public goods (N.B. Modelling regarding public goods NOT required)</p>
		<p>Division of labour</p> <p>(i) Types: simple, complex and regional</p> <p>(ii) Advantages and disadvantages</p> <p>(iii) Limitations</p>

	Topic	Key Points
		<p>Factors of production</p> <p>(i) Human resources</p> <ul style="list-style-type: none"> • Labour: supply, productivity, mobility and different methods of wage payments • Entrepreneurship: risk-bearing and decision-making <p>(ii) Natural resources</p> <ul style="list-style-type: none"> • Land: supply <p>(iii) Man-made resources</p> <ul style="list-style-type: none"> • Capital: accumulation and depreciation <p>(iv) The features of (i) to (iii) in Hong Kong</p>
		<p>Production and costs in the short run and long run</p> <p>(i) Definition of short run and long run</p> <ul style="list-style-type: none"> • In terms of fixed and variable factors of production <p>(ii) Law of diminishing marginal returns</p> <ul style="list-style-type: none"> • Illustration by total product, average product and marginal product schedules only <p>(iii) Cost of production</p> <ul style="list-style-type: none"> • Fixed and variable costs • Total, marginal and average cost of production (N.B. General relationship between total, marginal and average cost curves NOT required. Relationship between short run and long run cost curves NOT required) <p>(iv) Economies and diseconomies of scale</p> <ul style="list-style-type: none"> • Internal economies and diseconomies of scale • External economies and diseconomies of scale (N.B. Economies and diseconomies of scale illustrated by average cost. Further classification of internal and external economies and diseconomies of scale NOT required) <p>(v) Expansion and integration of firms</p> <ul style="list-style-type: none"> • Types: vertical, horizontal, lateral and conglomerate • Motives

	Topic	Key Points
		<p>The objectives of firms:</p> <p>(i) Profit maximization with given prices and marginal cost schedule</p> <ul style="list-style-type: none"> • Meaning of profit as the difference between total revenue and total cost • Profit maximizing choice of output for individual firms with given prices and marginal cost schedule • The marginal cost schedule as the supply schedule of individual firms <p>(N.B. Long run supply NOT required)</p> <p>(ii) Other objectives: market share, provision of non-profit making services, corporate social responsibility, etc</p>
C	Market and Price	Law of Demand
		<p>Individual demand</p> <p>(i) Factors affecting individual demand</p> <p>(ii) Complements and substitutes, superior and inferior goods (N.B. Giffen goods NOT required)</p> <p>(iii) Individual demand schedule and importance of the <i>ceteris paribus</i> assumption</p> <p>(iv) Difference between change in quantity demanded and change in demand</p>
		<p>Market demand</p> <p>(i) Horizontal summation of individual demand curves</p> <p>(ii) Factors affecting market demand</p>
		<p>Individual supply</p> <p>(i) Factors affecting individual supply</p> <p>(ii) Individual supply schedule and importance of the <i>ceteris paribus</i> assumption</p> <p>(iii) Difference between change in quantity supplied and change in supply</p>

	Topic	Key Points
		<p>Market supply</p> <p>(i) Horizontal summation of individual supply curves</p> <p>(ii) Factors affecting market supply</p>
		<p>Interaction between demand, supply and price</p> <p>(i) Definition of equilibrium: no tendency to change</p> <p>(ii) Equilibrium price and quantity</p> <p>(iii) Effects of change in demand and/or change in supply on equilibrium price and quantity</p>
		<p>Consumer and producer surplus</p> <p>(i) Marginal benefit to consumers, willingness to pay, consumer surplus, demand curve and their relationship</p> <p>(ii) Marginal cost of firms, minimum supply-price, producer surplus, supply curve and their relationship</p> <p>(iii) Illustrate consumer surplus and producer surplus in a demand-supply diagram</p> <p>(N.B. Concepts of utility, marginal rate of substitution, and indifference curves NOT required)</p>
		<p>Functions of prices</p> <p>(i) Rationing function: existing supplies are distributed to users with highest value</p> <p>(ii) Allocative function:</p> <ul style="list-style-type: none"> • Demand is derived from marginal benefit, and supply is derived from marginal cost; the interaction between demand and supply then determines price and resources allocation • Changes in relative prices and resource deployment <p>(N.B. Graphical analysis NOT required)</p>
		<p>Price elasticity of demand</p> <p>(i) Arc elasticity</p> <p>(N.B. Point elasticity, cross elasticity and income elasticity NOT required)</p> <p>(ii) Relationship between price elasticity and total revenue</p> <p>(iii) Factors affecting price elasticity of demand</p>

	Topic	Key Points
		Price elasticity of supply (i) Arc elasticity (N.B. Point elasticity and cross elasticity NOT required) (ii) Factors affecting price elasticity of supply
		Market intervention (i) Price intervention: price ceiling and price floor (ii) Quantity intervention: quota <ul style="list-style-type: none"> • Illustration of quota by a kinked supply curve (iii) Unit tax and unit subsidy <ul style="list-style-type: none"> • Determination of the share of the tax burden/subsidy between producers and consumers (N.B. Graphical illustration of price ceiling, price floor, quota, unit tax and unit subsidy and their impact on price and quantity)
D	Competition and Market Structure	Perfect competition and imperfect competition (monopolistic competition, oligopoly and monopoly) (i) Definition of market (ii) General features <ul style="list-style-type: none"> • Number of sellers • Number of buyers • Nature of product • Ease of entry • Availability of information • Price taker/price searcher (iii) Sources of monopoly power (N.B. The four different forms of market structure are theoretical constructs. Actual examples may only be approximations of the above constructs. General analysis with marginal revenue and marginal cost curves NOT required)

	Topic	Key Points
E	Efficiency, Equity and the Role of Government	<p>Efficiency</p> <p>(i) Conditions for efficiency: Maximization of total social surplus; marginal benefit equals marginal cost</p> <p>(ii) Deviations from efficiency:</p> <ul style="list-style-type: none"> • Price ceiling, price floor, tax, subsidy and quota • Deadweight loss <p>(iii) Divergence between private and social costs (benefits): market versus government solutions, illustrated by examples ONLY</p> <p>(N.B. Graphical analysis with illustration of consumer surplus and producer surplus in a demand-supply diagram only. The term “Pareto condition” NOT required)</p>
		<p>Equity</p> <p>(i) Efficiency and equity in a market economy</p> <p>(ii) Measuring income inequality: income distribution, Lorenz curve and Gini coefficient (N.B. Construction of the Lorenz curve and Gini coefficient NOT required)</p> <p>(iii) Sources of income inequality: human capital (e.g. skill differentials), discrimination and unequal ownership of capital, etc</p>
		<p>Policy concerns</p> <p>(i) Equalizing income or equalizing opportunities</p> <p>(ii) Disincentive effects of taxes and transfers</p> <p>(iii) Trade-off between equity and efficiency</p>

	Topic	Key Points
F	Measurement of Economic Performance	<p>National income</p> <p>(i) National income as a general term for aggregates like Gross Domestic Product (GDP) and Gross National Product (GNP)</p> <p>(ii) Gross Domestic Product (GDP)</p> <ul style="list-style-type: none"> • The three approaches to measure GDP: production approach (value-added approach), income approach, expenditure approach (N.B. Components of GDP compiled under the income approach NOT required) • GDP at current and constant market prices • GDP at factor cost • per capita GDP; growth rate of GDP (N.B. Other measures related to GDP NOT required) <p>(iii) GNP as GDP plus net income from abroad (N.B. Other measures related to GNP NOT required)</p> <p>(iv) Uses and limitations of national income statistics as an indicator of economic welfare and for international comparison (N.B. Human Development Index NOT required)</p>
		<p>General price level as measured by Consumer Price Index and implicit price deflator of GDP (N.B. Construction of CPI and implicit price deflator of GDP NOT required)</p>
		<p>Unemployment and underemployment rates as measured in terms of the percentage of unemployed and underemployed persons in the labour force</p>
		<p>Recent trends of national income, general price level and unemployment in Hong Kong</p>

	Topic	Key Points
G	National Income Determination and Price Level	<p>Aggregate demand (AD)</p> <p>(i) Reasons for a downward sloping AD curve</p> <p>(ii) Determinants of aggregate demand:</p> <ul style="list-style-type: none"> • Private consumption expenditure, which in turn depends on disposable income, the desire to save, wealth (value of assets), interest rate, etc • Investment expenditure, which in turn depends on business prospect, interest rate, etc • Government expenditure • Net export, which in turn depends on the economic conditions of trading partners, exchange rate, etc <p>(N.B. Derivation of the AD curve, magnitude of the shift in the AD curve and factors affecting the slope of the AD curve NOT required)</p>
		<p>Aggregate supply (AS)</p> <p>(i) Reasons for an upward sloping short run AS curve</p> <p>(ii) Reasons for a vertical long run AS curve</p> <p>(iii) Factors affecting short run and long run AS</p> <p>(N.B. Explanation by the Phillips curve and magnitude of the shift of the AS curve NOT required)</p>
		<p>The determination of level of output and price</p> <p>(i) Determination of the equilibrium level of output and price level in the AS-AD model</p> <p>(N.B. Quantity Theory of Money NOT required)</p> <p>(ii) Changes in the equilibrium level of output and price level caused by change(s) in the AD and/or AS</p> <p>(iii) Relationship between employment and output level</p> <p>(N.B. Interest rate is treated as exogenously determined)</p>
H	Money and Banking	<p>Money</p> <p>(i) Definition of money</p> <p>(ii) Nature and functions of money</p>

	Topic	Key Points
		<p>Banks: functions and services</p> <p>(i) Commercial banks and central bank</p> <p>(ii) Licensed banks, restricted licence banks and deposit-taking companies in Hong Kong</p> <p>(iii) How central banking functions are performed in Hong Kong</p>
		<p>Money supply</p> <p>(i) Definitions of money supply in Hong Kong</p> <p>(ii) Credit creation/contraction and the banking multiplier</p>
		<p>Money demand</p> <p>(i) Meaning of transactions demand for money and asset demand for money</p> <p>(ii) Money demand as a function of nominal interest rate and income</p>
		<p>Determination of interest rate in the money market</p> <ul style="list-style-type: none"> • Interaction of money supply and money demand
		<p>Hong Kong as a financial centre</p> <p>(i) Factors contributing to its development as a financial centre</p> <p>(ii) Effects on the Hong Kong economy</p>
I	Macroeconomic Problems and Policies	<p>Business cycles: a description of the short run fluctuations in real GDP around the long run trend</p> <p>(N.B. Theories of business cycles NOT required)</p>
		<p>Inflation and deflation</p> <p>(i) Definitions of inflation and deflation</p> <p>(ii) Relationship between nominal and real interest rates</p> <p>(iii) Redistributive effects</p> <p>(iv) Inflation and Quantity Theory of Money</p> <p>(N.B. Velocity of circulation of money assumed to be constant)</p>

	Topic	Key Points
		Unemployment (i) Meaning of unemployment (ii) Meaning of underemployment (iii) Cost of unemployment (N.B. Phillips curve NOT required)
		Fiscal policy (i) Meaning of fiscal policy <ul style="list-style-type: none"> • Definition of budget; surplus budget, deficit budget and balanced budget • Taxation <ul style="list-style-type: none"> – Principles – Classification of taxes <ul style="list-style-type: none"> - Direct and indirect taxes - Progressive, proportional and regressive taxes • Public expenditure: classification by function (N.B. With specific reference to Hong Kong) (ii) Effect of fiscal policy on the level of output and price
		Monetary policy (i) Meaning of monetary policy (ii) Effect of monetary policy on the level of output and price

	Topic	Key Points
J	International Trade and Finance	<p>Free trade and trade barriers</p> <p>(i) Absolute advantage, comparative advantage and gains from trade (N.B. Illustration by the production possibilities frontier NOT required)</p> <p>(ii) Using the pattern of trade in Hong Kong to illustrate the principle of comparative advantage</p> <p>(iii) Importance of trade to Hong Kong's economy</p> <p>(iv) Trade barriers</p> <ul style="list-style-type: none"> • Types • Effects of tariff and quota on price and output for a small open economy • Trade barriers faced by Hong Kong <p>(v) Hong Kong's attempts to overcome trade barriers</p> <ul style="list-style-type: none"> • Trade promotion • Role of the HKSAR Government • Role of international economic institutions (e.g. World Trade Organisation)
		<p>Brief introduction to the balance of payments account</p> <ul style="list-style-type: none"> • Current account <ul style="list-style-type: none"> – Main components of the current account: goods, services, income and current transfers (N.B. Sub-classification of these components NOT required) • Capital and financial account (N.B. Sub-classification of this account NOT required)
		<p>Exchange rate</p> <p>(i) Meaning of exchange rate (N.B. Graphical analysis NOT required)</p> <p>(ii) Effect of a change in the exchange rate on import price and export price</p> <p>(iii) Brief introduction to the linked exchange rate system in Hong Kong (N.B. Mechanism of maintaining the linked exchange rate NOT required)</p>

2.2.2 Elective Part

Elective Part 1

Topic	Key Points
Monopoly Pricing	<p>(i) Simple monopoly pricing</p> <ul style="list-style-type: none">• Determination of price and output• Efficiency implications <p>(N.B. Graphical and numerical illustrations with given demand, marginal revenue and marginal cost curves)</p> <p>(ii) Price discrimination</p> <ul style="list-style-type: none">• Meaning of price discrimination• Types: First, second and third degree price discrimination• Conditions for different types of price discrimination <p>(N.B. Price and output determination NOT required)</p>
Anti-competitive Behaviours and Competition Policy	<p>(i) Major forms of anti-competitive practices</p> <ul style="list-style-type: none">• Horizontal agreements among competitors: agreements to restrict prices and output• Vertical agreements between buyers and sellers• Mergers: horizontal mergers, vertical mergers and potential competition mergers <p>(ii) The impact of anti-competitive practices</p> <p>(N.B. Graphical analysis NOT required)</p> <p>(iii) Justifications and concerns for competition policy</p>

Elective Part 2

Topic	Key Points
Extension of Trade Theory	<p>(i) Illustration of comparative costs and gains from trade with the aid of production possibilities frontier (N.B. The use of indifference curve NOT required)</p> <p>(ii) Comparative advantage and its relation to globalization</p>
Economic Growth and Development	<p>(i) Measurement of economic growth and development</p> <ul style="list-style-type: none"> • Changes in real GDP • Changes in per capita real GDP • Changes in Human Development Index <p>(ii) Factors affecting growth of an economy</p> <ul style="list-style-type: none"> • Inputs: physical capital, human capital, natural resources, technological change • Policies: saving and investment, foreign direct investment, trade, education, population, property rights, research and development <p>(N.B. The analytical framework of aggregate production function and the theories and models of economic growth NOT required)</p> <p>(iii) The desirability and costs of economic growth</p> <ul style="list-style-type: none"> • Trade-off between current and future consumption • Growth, living standard and income distribution • Resources exhaustion, pollution and sustainable development <p>(iv) International/regional comparison</p>

2.2.3 Time allocation

	Topic	Suggested lesson time (hours)
Compulsory Part	A Basic Economic Concepts	12
	B Firms and Production	30
	C Market and Price	32
	D Competition and Market Structure	8
	E Efficiency, Equity and the Role of Government	18
	F Measurement of Economic Performance	12
	G National Income Determination and Price Level	16
	H Money and Banking	18
	I Macroeconomic Problems and Policies	30
	J International Trade and Finance	18
Elective Part	Elective Part 1: Monopoly Pricing, Anti-competitive Behaviours and Competition Policy; OR Elective Part 2: Extension of Trade Theory, Economic Growth and Development	22
	Sub-Total	216
	Suggested time allocation for conducting learning activities such as news commentary and other enquiry activities	54
	Total	270

Chapter 3 Curriculum Planning

This chapter provides guidelines to help schools and teachers to develop a flexible and balanced curriculum that suits the needs, interests and abilities of their students, and the context of their school, in accordance with the central framework provided in Chapter 2.

3.1 Guiding Principles

To enhance the effectiveness of learning and teaching Economics, teachers are encouraged to consider adopting appropriate planning to develop a balanced and coherent curriculum which enables students to take an active role in economic enquiry.

The following are principles for planning the Economics curriculum in school:

- (a) The curriculum rationale, school context and student characteristics should be considered as a whole in determining how economics can help to prepare students for adulthood. A systems perspective is better than a piecemeal approach.
- (b) Students' prior knowledge, especially their learning experience in junior secondary curriculum, should form the basis for planning.
- (c) A proper sequence of concepts and skills should be observed, so that concepts ranging from "easy to difficult", "concrete to abstract", "specific to general", etc can be introduced at the appropriate time. This is especially important for topics with clear linearity in content arrangement. Key concepts should be applied and reinforced in different economic contexts at different stages of the learning process.
- (d) The curriculum plan should allow for a wide range of learning activities to provide challenge for students of different abilities. The level of challenge, engagement in learning tasks and the social dimensions of learning should be considered in planning and sequencing learning activities.
- (e) Consideration should be given to collaboration with other curricula across different Key Learning Areas so as to foster greater coherence between Economics and other subjects.
- (f) The programme should prepare students adequately for further studies at the tertiary level. At the same time, it should provide an equally valuable learning experience for those who leave the subject at the end of their senior secondary education.

3.2 Progression

Core concepts and ideas which are fundamental in helping students to see the relevance of economics to their lives and supporting their understanding of other topics should be introduced at an early stage. In sequencing topics, teachers should consider the maturity of students and their concerns. Topics that are remote or unfamiliar to them should be scheduled later, as should abstract concepts.

The senior secondary Economics curriculum is designed on the assumption that S4 students' exposure to macroeconomic variables and events is relatively limited compared to their daily experience in making consumption choices. The following are recommended for teachers' consideration on planning the progression of study in this subject:

- (a) Economic concepts like cost, choices, production, firm and prices should be introduced at the beginning of the course.
- (b) Topics on macroeconomics, such as measurement of Gross Domestic Product and AS-AD analysis, can be introduced at around late S4 or S5. Then, more analytical microeconomic topics, such as efficiency, can be introduced.
- (c) By S5, students will have been well equipped with the essential tools for analysing cases and phenomena reported in the news. Application of these tools should be encouraged in School-based Assessment tasks.
- (d) Comparative advantage and other topics on trade can be introduced either in late S5 or the beginning of S6, depending on the readiness of students and curriculum scheduling considerations.
- (e) The Elective Part serves the purposes of extending some learning elements of the Compulsory Part and broadening students' economic knowledge. Therefore, it is recommended that the Elective Part should be scheduled in S6.

Teachers' judgment is crucial in sequencing more abstract tools of economic analysis such as price elasticities of demand and supply, and AS-AD model. Introducing these tools in late S4 or early S5 may help more academically inclined students to grasp them earlier, so that they can use these tools to explain events around them, and consequently have greater motivation to pursue their studies further in this discipline.

However, for student groups with greater diversity in motivation or cognitive readiness, the teacher should focus more on the design of authentic learning experiences so that students' engagement can be significant and sustained.

To summarise, there is no one best learning and teaching sequence for all. It is an area in which teachers' expert judgment is important. Two detailed examples of teaching sequences are described in Appendix 1 and 2 for teachers' reference.

3.3 Curriculum Planning Strategies

The design of appropriate learning experiences in the senior secondary Economics curriculum is both an art and a science. Research findings and knowledge developed through professional practice give teachers a rational foundation for their planning. However, given the available teaching strategies and methods, judgment about what is best for students is an art. Teachers should gather adequate information about their learners so that they can exercise professional judgment prudently. For a more student-centred approach, teachers are encouraged to consider the following strategies in planning the curriculum:

3.3.1 Integrating classroom learning and independent learning

In the classroom, a teacher can provide many learning opportunities for each student. For the long term benefit of students, teachers should encourage students to become independent learners. Teachers can foster intrinsic motivation in students through a conscious effort to use authentic cases and observations to make economic explanations interesting. Teachers should design meaningful learning tasks in and outside the classroom. Schools could consider having more explicit guidelines on ways of minimising rote-learning and excessive competition among individual learners in the curriculum plans.

3.3.2 Catering for learner diversity

Students vary in their family, social, economic and cultural backgrounds, and have different talents and interests. The senior secondary Economics curriculum is designed in such a way that the basic concepts and tools of analysis are embedded in the Compulsory Part, whereas the Elective Part includes elements that call for extended analysis and broader economic knowledge. Students may choose the one that suits their interests and aptitudes best. Those who are interested in microeconomic analysis such as pricing strategies of firms may choose Elective Part 1. On the other hand, students who are interested in macroeconomic performance and growth of the economy may choose Elective Part 2. Furthermore, the curriculum has reserved lesson time for students to conduct enquiry activities. They may choose the enquiry issues that suit their interest most.

In the classroom, students differ in their attention levels and in their ability to receive and interpret messages. Teachers are encouraged to adopt a variety of learning and teaching approaches. For example, besides direct instruction, teachers can also involve students in hands-on tasks, communicating with peers, presenting ideas, commenting on social events, drawing diagrams for an idea on blackboard, doing searches on the internet, etc, so that students can develop their strengths in these tasks and gain confidence, competence and a sense of achievement.

3.3.3 Building a learning community among the students

The concept of a learning community should also be considered in curriculum planning. Students should be given tasks which involve collaboration through discussion and group problem-solving. The teacher should monitor and facilitate students' working by providing suitable guidance at the right time. A free flow of ideas and insights, with the teacher's input at times, generates a self-perpetuating learning cycle in a student learning community. Building up a learning community among students should be one of the planning targets for Economics teachers.

3.3.4 Flexible class organisation

The flexible use of class time and teacher resources should be explored for schools with two or more Economics classes at one level. Learning activities in a large group can be combined with small group tutoring with the same number of teachers. For example, block timetabling allows flexibility in staff deployment for varied learning activities. In an afternoon block, two classes may be involved in enquiry projects with the support of two teachers and two teaching assistants; and in the next cycle, the same block may be used for lecturing or group learning activities in the school hall, during which only one Economics teacher is required. This arrangement, when used in conjunction with similar arrangements for other subjects, can provide more variety in learning activities with the same teaching staff.

3.3.5 Cross-curricular planning

To maximise student learning, cooperation with other subjects should also be considered. For instance, the study of efficiency and equity issues in pollution can reinforce Geography and Liberal Studies learning if teachers of these subjects align their teaching schedule suitably. Many approaches to social issues demand multi-disciplinary insights. For a rich learning experience, teachers can design tasks such as enquiry projects on "Avian Flu and patented medicine" in which Economics teachers work with Biology or Liberal Studies teachers. This will show students that subject boundaries should not be obstacles to learning. The

interweaving of similar concepts through different or seemingly unconnected contexts across subjects will have a strong and lasting impact on students, and be rewarding for teachers. Systematic collaboration among subjects to foster greater coherence between Economics and other subjects can be considered when the conditions for doing so are favourable. Collaboration in designing a cross-curricular unit can be the starting point.

3.3.6 Synchronisation of content elements with authentic learning opportunities

Teachers can take advantage of social or public events that are directly related to the content covered in Economics. For instance, the government's announcement of the annual budget in February is related to the topic on taxation, and business opportunities for the public in bazaars in major public parks before the Lunar New Year involve concepts in the topics on business ownership and market structure. The matching of these opportunities with the timing of relevant content components will enhance student learning.

3.3.7 Integrating learning with assessment

Learning should be supported by assessment, and assessment tasks in a learner-controlled mode, such as writing a reflective journal, can be part of learning. Teachers should place more emphasis on the role of continuous and formative assessment in providing feedback to students for improvement.

3.4 Managing the Curriculum

3.4.1 Areas of work

In managing the senior secondary Economics curriculum, teachers should consider the following:

(a) Understanding the curriculum and learning context

- understand the *Senior Secondary Curriculum Guide* (CDC, 2007) and this Guide with a view to adapting the central curriculum for school-based curriculum development;
- consider the community culture and the changing needs of society while drawing up the curriculum plan;
- make reference to the school's vision and mission, strengths and policies, as well as students' abilities and interests, for major curriculum decisions;
- have a shared vision of economics education and a clear understanding of the aims, objectives and learning outcomes of the Economics curriculum; and

- be committed and enthusiastic in collaborating with colleagues in cultivating a positive environment for students to construct knowledge independently and collaboratively.

(b) Planning and implementing the curriculum

- design and implement schemes of work to help students to achieve the curriculum aims and learning objectives of the Economics curriculum;
- design modes of assessment and tasks to promote assessment for learning;
- design a proper learning and teaching sequence that will best meet students' needs and enhance their progress and achievements in learning;
- articulate explicitly the generation and consolidation of teachers' professional knowledge; and
- develop a collaborative learning and teaching culture to enhance the effective delivery of the senior secondary Economics curriculum. Teachers may consider various possibilities, such as:
 - developing a team-teaching culture in order to share teaching experience;
 - creating learning and sharing opportunities through networking with other schools; and
 - exploring timetabling arrangements that can enable collaborative learning or professional development among teachers.

(c) Evaluating the curriculum

- improve the implementation of the Economics curriculum continuously through action research, collaborating with colleagues or experts, etc;
- review the curriculum regularly in accordance with the learning and teaching context and make adjustments whenever necessary;
- establish a system of curriculum evaluation with teachers' full participation and ownership, and record evidence of student learning and achievements; and
- support students in reflecting, regulating and controlling their own learning through the design of class activities that promote active learning.

(d) Developing learning and teaching resources

- develop, collect and organise learning and teaching resources such as articles, reports, videos and software for student learning and teacher reference, and provide easy access to them;
- make effective use of school and community resources to facilitate student learning; and
- expand learning and teaching resources through the use of information and communication technologies.

For more ideas on learning and teaching resources, please refer to Chapter 6 “Learning and Teaching Resources”.

(e) Building capacity

- keep abreast of the latest curriculum developments, teaching strategies and subject knowledge;
- reflect on practice through video-taping lessons, if possible, with support from peers for more in-depth analysis and alternative views;
- explore and use knowledge creation processes, such as collaboration among teachers in lesson planning, and lesson observation with pre- and post- conferencing;
- build networks with other schools for sharing and professional development purposes; and
- inculcate trust among colleagues through professional discourse and share good practices in Economics learning and teaching, which is a fundamental requirement for the success of the above.

(f) Managing change

- teachers should refer to this Guide to make necessary changes in planning their schemes of work;
- changes in the paradigm and practice of teaching should be based on trust, professionalism and the ability to deliver a curriculum satisfactorily;
- changes in practice should be supported by evidence and research, with continuous reflection on curriculum objectives and achievements;
- decisions to change professional practices should be based on communication and a free flow of information about learning and teaching among teachers; and
- changes in the culture and professional norms should be used as indicators of the success of change management.

3.4.2 Roles of different stakeholders

Principals, PSHE KLA co-ordinators, Economics panel chairpersons, Economics teachers and parents play different roles in the planning, development and implementation of the school-based Economics curriculum. Collaboration is vital in developing and managing the curriculum.

(a) Economics teachers

- keep abreast of the latest changes in curriculum, learning and teaching strategies and assessment practices;
- contribute to Economics curriculum development, implementation and evaluation, and

suggest strategies for learning, teaching and assessment;

- develop students' potential in learning economics, and encourage them to learn actively;
- participate actively in professional development, peer collaboration and professional exchange; and
- participate in educational research and projects in order to contribute to the learning and teaching of Economics.

(b) PSHE KLA co-ordinators and Economics panel chairpersons

- lead and plan Economics curriculum development, and set clear directions for it;
- monitor the implementation of the curriculum, and make appropriate adjustments in strategies for learning, teaching and assessment, with due consideration for students' needs;
- facilitate professional development by encouraging panel members to participate in training courses and workshops;
- hold regular formal and informal meetings with panel members to strengthen coordination and communication among them;
- promote professional exchange on subject knowledge and learning and teaching strategies; and
- make the best use of resources available in the school and community.

(c) Principals

- understand students' strengths and interests, as well as the significance of economics learning;
- take into consideration students' needs, school context and the central curriculum framework in formulating the curriculum, as well as instructional and assessment policies;
- coordinate the work of KLA leaders and subject panel chairpersons, and set clear targets in curriculum development and management;
- empower and support PSHE KLA co-ordinators or Economics panel chairpersons and teachers to promote a culture of collaboration among teachers and to facilitate the learning and teaching of Economics;
- understand the strengths of teachers, and deploy them flexibly to teach student groups with different characteristics;
- convey a clear message to parents regarding the significance of economics education; and
- build networks among schools, community sectors and various organisations at management level to facilitate the development of the curriculum.

(d) Parents

- support the development of the Economics curriculum;
- encourage their children to learn more about the social or economic phenomena around them, especially through the media, to increase their awareness and sensitivity;
- actively communicate with their children on economic issues in which they show interest; and
- understand the value of economics education, and encourage and support their children in enquiry learning.

In sum, curriculum planners need to take curriculum objectives into consideration and devise a deliverable plan with compatible resources so that students' aspirations and potential can be realised. Professional knowledge is the key. Teachers need to adopt a student-centred teaching approach to stimulate students' learning, interest and motivation. Through diversified practical learning activities, students gain knowledge and experience, and see the connections of what they are learning to their daily life. They also develop skills in critical thinking and independent learning, and an increased disposition and ability to collaborate. Teachers should also adopt a range of modes of assessment, and use formative and summative assessment flexibly in order to assess students' performance comprehensively and gauge their development in generic skills, values and attitudes.

Chapter 4 Learning and Teaching

This chapter provides guidelines for effective learning and teaching of the Economics curriculum. It is to be read in conjunction with Booklet 3 of the *Senior Secondary Curriculum Guide* (CDC, 2007), which provides the basis for the suggestions set out below.

4.1 Knowledge and Learning

Economics is a discipline which studies human behaviour in relation to choices, resource allocation and coordination. This body of knowledge has a high level of abstraction which can be very challenging for learners at the senior secondary level. Economic analysis yields answers to, or views on, many questions or paradoxes, and the answers may be contrary to common sense. The analytical skills used in the discipline follow stringent rules of logic and young learners need time and effort to master them.

To master economic knowledge, students have to develop understandings through connecting concepts and theories with real-world events. Knowledge construction in economics requires both inductive and deductive reasoning. In general, young learners find the subject demanding as their economic enquiry skills are still developing, and they have only limited social awareness. Teachers' expertise and support are the keys to student success in studying economics.

Economics was introduced into the Hong Kong school curriculum over 25 years ago, and many good practices in learning and teaching have been developed. However, many students still tend to adopt a passive and surface approach, such as memorisation, to their learning. The essential understanding and economic enquiry skills need to be developed more effectively through more active learning in the classroom.

The senior secondary Economics curriculum does not require students to master advanced economic theories, which are more suitable for tertiary level study. Very advanced and abstract economic tools should be avoided at this level as they may frustrate students and reduce their interest in the subject instead of preparing them for the future. This curriculum aims to equip senior secondary students with knowledge, skills and dispositions for citizenship, and to prepare them to be effective decision-makers. Learning to learn is emphasised, and encouraging students to ask meaningful questions in economic terms is a priority. Teachers need to create a learning context in which students can be actively

engaged in the construction of new understandings.

The framework of this curriculum is designed to create more room for learner-centred activities. Many of the topics chosen, such as consumer surplus and efficiency, are linked to daily decisions. The key concepts and skills required in the curriculum are applicable to many phenomena that students encounter, and teachers should explore opportunities for the application of these concepts so as to enhance students' understanding. When students see the relevance of economics to their daily life, their motivation for studying the subject will increase. The essential learning experiences in this curriculum, particularly when they are related to current issues, can enrich students' discussion and broaden their views.

4.2 The Learner and Effective Learning

Students new to the discipline of economics are likely to be intrigued by the nature of the subject. It is not about making money, but it studies "What is money?" It does not teach students how to invest, but it deals with costs and benefits of studying at university. It does not advocate that the government should impose a sales tax, but it studies the possible effects of a sales tax on the economy.

At the beginning of the course, students are not familiar with the focuses and concerns of the subject, and they do not possess the analytical tools and perspectives needed for economic analysis. However, they are already frequently involved in economic decision-making in different aspects of their lives, and this experience is a good entry point. Economic education aims to give students alternative explanations to consider and improved skills for making rational choices. To build the knowledge, skills, analytical tools and perspectives required in the learning of economics, teachers need to adopt a wide repertoire of pedagogical approaches. This has the added advantage of allowing teachers to see how different learning approaches suit students with diverse learning needs, so that they can choose an appropriate mix of approaches to maximise learning for all.

To sustain learners' interest, the new tools they have acquired in economics should enable them to comprehend the world better. They should be provided with many opportunities to demonstrate their understanding through their performance in, for example, doing worksheets, drawing diagrams on the blackboard, giving presentations after an economics game, and preparing a board display on current news or issues.

4.3 Principles and Practices for Effective Learning and Teaching

The above ideas about knowledge, learning and understanding give rise to the following principles for organising learning and teaching activities:

4.3.1 Understanding learning objectives and choosing appropriate pedagogies

The setting of explicit and unambiguous learning objectives helps students to know where they are heading for in their learning. When students are able to make sense of each learning experience and can relate them all to their daily life, their motivation and efforts to learn are enhanced.

Students have varied strengths and dispositions. Whether or not they achieve the learning objectives set depends heavily on how the learning and teaching methods match their needs. A good match can be achieved by using a variety of learning tasks within a unit or lesson, and by adopting a wide range of pedagogies and varying them frequently throughout the senior secondary Economics course.

4.3.2 Guiding principles – meaningful context, engagement, feedback and consolidation

(a) *Use contexts which are meaningful to learners*

Learning will be more effective when students can connect the new ideas they are learning to daily life.

Example

The concept of “non-price allocation” can be illustrated by the allocation policy used in public housing with which many students are familiar. This new concept can help students to explain many observations about public housing allocation.

(b) *Engage students’ attention*

The higher the students’ level of attention and the greater their degree of engagement in a lesson, the more effective student learning will be.

Example

Questions that are interesting or have direct relationship to students' lives such as "Can a minimum wage really help workers?" can engage students' attention. Their engagement can be enhanced if they are provided with adequate background reading materials and have appropriate tools for analysis.

(c) *Provide an appropriate challenge*

Learning tasks which provide an appropriate level of challenge are essential for focusing students' efforts.

Example

On the topic of "cost", asking for economic explanations of the following question would promote lively discussion in class: "Why is it that Peter's mother, who is good at cooking, has decided not to prepare meals for the family and take up employment outside?" For another example, through writing a proposal for the use of a small piece of land in the school yard using "cost and benefit" analysis, students may produce creative ideas supported with justifications.

(d) *Build on students' prior knowledge and experience*

Students' motivation and understanding can be enhanced by connecting the learning tasks and their existing knowledge and experience.

Example

Ask students to compare the price of newspapers in convenience shops and supermarkets; and this can be followed by a contrast study on the price differences of cold drinks in the same locations. The pattern which emerges can be used to illustrate the concepts of "availability of substitutes" and "price elasticity of demand". These are examples where students have very good prior knowledge and they will probably offer many insightful observations for formulating hypotheses in such types of analysis.

- (e) *Provide opportunities for learners to generate new ideas or a new product as the result of learning*

In the process of generating new ideas and producing a new product, a learner uses his/her knowledge actively and learning takes place.

Example

On preparing a display board which shows and analyses the salient features of the HKSAR Government Budget as announced in February or March each year, students acquire the skills of collating, interpreting and analysing economic information. Their learning will be reinforced if they are then asked to design a display in March for the draft central and local budgets presented by the Ministry of Finance of the Central People's Government. A comparison of the two budgets and a display of the findings allow students to generate many new ideas for enquiry. For example, in contrast to the Central People's Government, the HKSAR Government does not have military expenditure, and there is no need for her to support the agricultural sector.

- (f) *Give timely feedback during the learning process*

Feedback helps a learner to make adjustments to improve his/her knowledge-construction process.

Example

On discussing the relationship between households' income and their demand for a good, some students might have the misconception that, as income increases, demand for goods will in general increase. To correct this misconception, the teacher can ask students to consider their own pattern of rice consumption when income changes.

- (g) *Consolidate new learning through debriefing and structured consolidation activities*

Many learners are unable to structure their new learning experiences immediately after a learning activity. Teachers, therefore, need to facilitate and demonstrate the process of structuring learning experiences in a systematic way. It is best if students are

equipped with skills to construct their own lesson notes and consistently apply them in their learning.

(h) *Provide opportunities to apply knowledge and skills to similar or novel contexts*

The application of knowledge to a new task helps to consolidate knowledge and skills. More importantly, this practice helps to strengthen learners' ability to transfer knowledge and skills to different but relevant contexts.

Example

After learning about “price determination”, students may try making predictions about the price of chicken and related goods if the government relaxes the import ban when the threat of avian flu is reduced. Collecting newspaper reports on changes in the prices of other related goods and proposing explanations for them can also be a useful practice for helping students to construct economic knowledge.

(i) *Encourage a life-long learning disposition*

It is undesirable for teachers to foster students' heavy dependency on them, as they are helping their students to prepare for future challenges. In designing learning and teaching activities, the teacher should attempt to encourage creativity and develop higher-order thinking skills in students. Through successful learning experiences, students can be empowered. They will gradually develop a set of thinking and problem-solving skills which suit their strengths, as well as a more positive view on the value of effort and persistence. This process helps students to prepare for life-long learning.

(j) *Promote students' capacity for self-directed learning*

The practice of reflection and conscious review of their thinking can increase learners' awareness and control of their thinking processes, and provide a firm basis for independent learning. Teachers can promote the development of self-directed learning through dialogue, reflection, thinking aloud and other similar strategies.

(k) *Choose appropriate examples*

Economics studies human behaviour, and there are plenty of events, cases and issues which teachers can adopt to promote learning. It is important to choose examples that match students' experience and interest.

Example — Teaching “opportunity cost”	
“Opportunity cost” is usually introduced to students by using daily examples which are related to students' experience and interest.	
<p>Teacher A</p> <p>Example used</p> <p>Cost of going to the cinema (2 hours)</p> <p>Alternative 1: basketball game</p> <p>Alternative 2: revision</p> <p>Valuing of these choices usually done by listing priorities</p> <p>Reasons for using these as examples: Teacher A's students are accustomed to making these decisions.</p>	<p>Teacher B</p> <p>Example used</p> <p>Cost of studying at university</p> <p>Alternative 1: take up employment</p> <p>Alternative 2: start a small business</p> <p>The value of alternatives suggested by students, using monetary returns for comparison</p> <p>Reasons for using these as examples: Teacher B's students like more challenging questions; most have studying at university as their goal; and this also prepares them for a cost-benefit analysis of attending university as an enquiry project.</p>

4.4 A Wide Range of Pedagogical Approaches

Teachers play many roles in learning and teaching, such as designing learning contexts and tasks and facilitating student learning by providing feedback, while maintaining the learner's own control of learning during the process. Another equally critical role is acting as a knowledge expert, both in terms of discipline area and pedagogy.

Student learning can take a variety of pathways, and different pedagogies may lead to equally effective learning of different aspects of knowledge. For example, inductive enquiry, involving more student control, may be used for topics such as “economies of scale” which can be illustrated by many daily examples; while more abstract topics such as “the principle of comparative advantage” may need direct instruction by the teacher at the outset, supported by the use of worksheets in class. The next section discusses several pedagogical approaches for teachers’ reference, and explains some methods which are commonly used in Economics classrooms.

4.4.1 Teaching as direct instruction

Direct instruction, such as expository teaching and lecturing, involves the transmission of knowledge from teacher to students and has always been one of the approaches frequently adopted by teachers. With the use of advance organisers, appropriate sequencing and structure, clarity of explanation, the citing of illustrative examples and an effective flow of questions and answers, this approach can deliver a body of knowledge to a large audience effectively. However, direct instruction has various well-documented shortcomings in terms of student learning: learners need to be very attentive and highly motivated, and to relate the ideas presented to their prior knowledge. Teachers have to address the fact that some learners lack sufficient prior knowledge and motivation, and may not be able to understand their explanations fully.

To achieve better learning through direct instruction, the structure of presentations should be organised into steps that learners can follow. The terms and concepts employed should be familiar to students, and examples and demonstrations should be used to make explanations convincing and interesting. The appropriate use of analogies and metaphors may also improve the effectiveness of direct instruction.

Examples of analogy

An egg resting at the bottom of a bowl is a frequently used analogy for the concept of “equilibrium” in economics.

The analogy of “the volume of water in a sink and the flow of water from a tap” can be used to illustrate the concepts of stock and flow such as balance of saving deposit as a stock variable and income as a flow variable.

It is important for students to make notes in class, since organising, transforming and summarising their learning in words or diagrams of their own is a useful method of learning. Providing printed notes or outlines to learners does not promote the development of “learning to learn” skills, as no student input or reorganisation is required. This practice may also result in students not paying attention during the teacher’s presentation, and has long term adverse effect on student learning, especially for the less motivated.

Analytical exposition and deductive approaches for explaining economic theories through direct instruction – some suggested considerations

For some economic theories, the logical and deductive development of a framework of explanation is needed, for example, the AS-AD approach to explaining short-term economic fluctuation in output and employment. The complexity of macroeconomic phenomena and the variables involved places a limit on the effectiveness of inductive approaches: extracting the critical features of output determination and constructing an analytical tool inductively is too demanding for learners. A logico-deductive approach with explicit assumptions and clear steps to explain the model is more practical. During the learning process, guided practice in using the model to explain changes in output can improve student mastery; and then linking and applying this tool to authentic events can enhance understanding. This mode of learning requires learners’ concentration and the ability to think and manipulate abstract variables. It would be prudent to defer these topics to a later stage of the senior secondary Economics course.

4.4.2 Teaching as enquiry

The enquiry approach emphasises that the learner has to make the effort to find things out and learn from them. Learners have to search and collate evidence related to the goal of their enquiry and draw conclusions based on their findings and judgments. Teachers facilitate, guide, and provide expertise to support their students to construct knowledge. Teachers can develop their own variants from among the many types of enquiry design. For instance, teaching through enquiry may involve individual or group learning tasks. Project learning, field studies, and studies on economic issues are some of the methods commonly adopted by Economics teachers. In some schools, with prudent planning and design, teachers provide students with opportunities to learn through running a small scale business venture.

Teachers should be aware of the need for more effective time management and their changed role in enquiry learning. It requires a degree of tolerance of occasional slow progress of students, particularly in the beginning phase. However, teachers should be prepared to provide guidance and feedback when needed. Students' work should be assessed according to the amount of effort involved, the quality of output and other criteria. Any critical views aimed at future improvement should be communicated to students tactfully and constructively. Overall, an attitude of striving for excellence and a collaborative learning culture should be encouraged.

An appropriate balance between the use of enquiry and direct instruction should be established, and this will vary depending on the different needs of students.

For examples of some frequently used enquiry approaches in economics, please refer to Appendix 3.

4.4.3 Teaching as co-construction

In interpreting the world, young learners need to come to terms with the fact that there are divergent views on many issues. Students have to be given the chance to discuss with one another and with their teacher to get access to the views of others. Through discussion and collaboration in group tasks, each individual's knowledge can be constructed and their perspectives widened.

Problem-solving approach

Students have to study authentic issues in which they need to master the causes, consequences and relevant data. They may also have to suggest methods to alleviate or solve the problem based on a sound economic rationale. Such learning tasks provide students with experience in constructing knowledge and generating solutions to problems, and sharpen their critical thinking skills.

Example

A collaborative analysis of the ways to tackle the problem of the narrow tax base in Hong Kong could be given to students as a task, as could the problem of how to relieve congestion in the Cross-Harbour Tunnel in Hung Hom.

The three teaching approaches outlined above have wide applications in classrooms. They

are intertwined and complement each other. Teachers should try to vary their use in different learning contexts to achieve optimal results. As students have different abilities and learning styles, the same learning outcome may be achieved through different teaching approaches, and the same learning process may give rise to multiple learning outcomes.

4.4.4 Assessment for learning

Effective learning can be enhanced by appropriate and timely feedback. Assessment plays an important role in supporting learning as it provides both the teacher and the learner with useful information on progress in mastering a concept or skill. The following points should be considered to make assessment helpful in learning:

- (a) Tests and test items designed for assessment should be linked to learning objectives. The purpose of the items should be clear to both the teacher and the learners.
- (b) The teacher should make the assessments “low-stake”, and this message should be conveyed clearly to learners. Explaining the rationale behind the answers and helping students to understand why they made mistakes should be a standard practice.
- (c) The knowledge and skills tested should have an appropriate mix of levels of demand. Variations in assessment format, such as the inclusion of open-ended tasks, or collaborative types of assessment task, can be used to cater for diverse student needs.
- (d) Frequent but smaller scale assessment tasks which relate to the knowledge and skills developed in class are more effective than larger assessment tasks at longer intervals.
- (e) Assessment items may be integrated into worksheets. The items included should be well developed and focus on areas in which students have shown gaps in their understanding. Students can attempt the items on worksheets during class, and the teacher can then explain common patterns of mistakes, and learning can then move on.
- (f) Information from assessment should be systematically analysed, and it may be helpful to share the findings with other schools.

Example 1

A school teacher in Tin Shui Wai redesigned a test paper into a worksheet on “price elasticity of demand”. The steps in learning were broken down into component parts that the teacher judged would be suitable for her students.

Her students completed the worksheet, and their feedback was very positive. Some reported that they could master the concepts well through working on the tasks.

Example 2

With the help of a spreadsheet, a teacher in Tuen Mun identified and analysed the weaknesses in student learning by a simple and intuitive method. Please refer to Appendix 4 for further information.

4.4.5 The use of IT in supporting learning

Constructive discussion needs a solid knowledge base and evidence. The internet has opened up immense possibilities for learners to access information quickly and at a relatively low cost. It can be employed very effectively to promote independent learning, and the information it contains can be used profitably by students and teachers in discussions and enquiry activities.

However, the selection and use of information from the internet requires good language and thinking skills. Without proper selection, learners can be overwhelmed by the volume of information; and they may use whatever information they have accessed to complete tasks without judging it carefully, in which case little learning will take place. Economics teachers need to provide guidance on appropriate sources of information and ways to select materials from the internet.

There are also software and learning games that support learning in economics. For example, spreadsheets can be used to demonstrate the operation of banking multiplier; and concept maps and graphic organisers can be easily constructed by using commercial software. Again, teachers should provide support to students in selecting and using such tools for learning.

4.4.6 Catering for learning differences

In some schools, the students taking senior secondary Economics range widely in their abilities and orientation to learning. Some possible ways in which Economics teachers can handle such differences are suggested below.

- (a) The use of more hands-on tasks facilitates the learning of less able students, as can deliberately breaking down the key steps needed for understanding during the teaching process. The main aim is to cultivate in these students the confidence that they have the capacity to achieve the learning objectives. Success in overcoming new challenges will

help them to recognise that they can improve their attainment over time through effort and effective strategies, and to see that learning is critical for personal development.

- (b) Students with high ability may be given demanding tasks both in and outside the classroom, with the latter posing more sophisticated challenges. When these activities are done in class, it is important for teachers to lead students to focus on the strategies to be adopted, rather than on displaying their talent. Teachers should give feedback on the strategies learners have adopted and the critical knowledge elements in the tasks. Students should be encouraged to propose fields of enquiry in which they are interested. It may also be helpful to assign to students interesting reading materials, such as novels which use economic tools of analysis or economics articles which challenge conventional wisdom. An orientation to work collaboratively and constructively with peers should also be fostered.

Learning differences can be catered for through providing opportunities for them to demonstrate their understanding openly, like doing presentations, staging drama performances, drawing graphical representations, writing essays or making models.

Ongoing assessment with relevant and explicit criteria can be used to support learning for understanding in students of all ability levels. By incorporating opportunities for students to express their understanding, formative assessment can enhance learning, as mentioned in the general discussion of “assessment for learning” in section 4.4.4.

4.4.7 Reading to learn

Reading helps to open up young learners’ minds, and there are now many economics books targeted at a general audience. Newspapers and magazines also provide coverage of interesting current topics and controversies. Exposing students to the intricacies, anomalies and paradoxes in such material may not only stimulate their interest, but also enable them to develop a stronger sense of the connection between the study of economics and world developments.

The establishment of reading clubs in school can also play a useful role in student learning.

Examples

By reading the relevant research findings, students will discover that property agents in one US state were found to be selling their own houses more slowly (by 10 days) than

similar houses they represented in the property market, and these agents were selling their client's houses at a lower price (2% lower) than the prices for which they were selling their own houses.

For another example, by reading books on economic history, students may get the idea that the collapse of the gold standard in the 1930s contributed to the political turmoil in China in that period, and realise that the world is inter-connected.

4.5 Classroom Interaction

Interaction between students and teachers is necessary for effective learning. Through exchanging ideas among themselves, students can explore what they know and what they do not know, and clear up their confusions. Some pedagogical practices involving useful interaction and aspects of interaction are set out below.

4.5.1 Prompt and high quality feedback

As outlined above, useful feedback on strengths, common mistakes and weaknesses can be provided through interaction. Students learn best when feedback on their work or their process of learning is prompt. Teachers should also try to provide feedback as helpful as possible on students' work, such as constructive suggestions for improvement, and alternative methods or strategies that could be used. However, judgmental comments should be avoided.

4.5.2 Building quality time into lesson design

In general, it is not beneficial for students to just listen passively throughout a lesson. Teachers should try to include small tasks in their presentations, even in lectures, to increase the time students spend on-task. In enquiry activities, teachers should pay attention to providing quality time for students to interact and generate ideas. Teacher assistance and monitoring are also important to this process.

4.5.3 Scaffolding

At times, students may lack the essential skills or information needed for learning to progress smoothly. Scaffolding is support given to students so that they can learn effectively. This

usually involves breaking instructional or learning sequences into manageable parts for students. The component skills and knowledge are developed first through various learning activities, such as practice, learning games, background reading or simulated activities. These component skills and knowledge help students to move on to the next stage of learning. Some of the support can be gradually withdrawn from those who are progressing well. Scaffolding requires knowledge of students' capabilities and the methods that can engage them best in learning. Information technology can also be used to help provide scaffolding.

Example

Students need to master the following knowledge and skills in constructing a demand curve:

- (a) the concept of function and ordered pairs;
- (b) the skills in translating a demand schedule into a demand curve;
- (c) the units of the variables involved (\$ per unit for price and quantity per unit time for quantity demanded);
- (d) the understanding of the schedule as a plan; and
- (e) the reverse of mathematical convention, that is, the x-axis of a demand curve diagram is for the dependent variable, namely, the quantity demanded.

When planning a unit on this topic, teachers should check how well prepared students are for mastering the above knowledge and skills. They should ensure that students understand them before introducing the construction of a demand curve.

4.5.4 Effective questioning

Skilful questioning can make a significant difference to student learning. Some aspects of effective questioning are outlined below for teachers' consideration:

- (a) Questions should be linked to the objectives or focus of learning.
- (b) They should help to clarify learning tasks.
- (c) They should be set at a level which is appropriate for the students involved.
- (d) They should help to promote understanding of concepts and ideas. Simple recall questions about well-established knowledge are less helpful to learning.
- (e) Wait time should be given to the whole class before the teacher solicits responses from individual students, with the length of time given for constructing answers being

appropriate to the level of demand of the questions. Too short a wait time may discourage some students from thinking actively.

- (f) Questions should be sequenced in a way that builds up understanding step-by-step.
- (g) Feedback and follow-up questions should be used to help students to focus on the essential points to be learned.

More significant reflection on the part of the teacher during and after each episode of questioning can increase the positive impact on student learning. Video recording of lessons is now a convenient way for teachers to analyse their questioning strategies for improvement; and opportunities to watch other teachers in action should be explored.

4.5.5 Teacher debriefing

For learning activities involving knowledge construction, teachers need to ensure that students have adequate time to process, reorganise and restructure their work into a more systematic form. This is usually done during the debriefing phase after a discussion or an enquiry activity. Appendix 5 highlights some points to note in the debriefing after a learning activity.

Where the learning activity is experiential, students' experience and feelings should also be touched on in the debriefing, with the teacher helping them to see the main focus or learning goal of the activity.

Example

A teacher tried to use a hat manufacturing game to let students explore the concept of division of labour. An excerpt from the debriefing for this activity can be found in Appendix 6.

4.6 Learning Community

Earlier sections in this chapter illustrate the important roles of peers and teachers in student learning. By interacting with their peers and teachers, students are exposed to a wide range of perspectives, knowledge, dispositions and abilities, all of which provide a rich source of alternative ideas.

Teachers should try to harness the potential benefits of exposure to a variety of viewpoints by designing learning activities which involve debate, discussion and other collaborative tasks. In the process, a community of learners, characterised by partnership in the development of knowledge among students, and between teachers and their students, may emerge. When the students begin to use higher-order economic concepts, such as cost, in their daily discussions with one another and frequently seek the teacher's views on economic issues, a learning community is in the making. Students are encouraged to take increasing responsibility for developing their own expertise while contributing to the common goals of the community.

4.7 Concluding Remarks

Different learning and teaching strategies can achieve similar learning outcomes depending on: students' ability, learning styles and expectations; teachers' specific strengths; and the learning context. Teachers should try to depart from their regular practices by allowing some room for experimentation with different approaches when the conditions are conducive to this.

Feedback to students on their answers to questions, or their performance on tasks, presentations and tests has great impact on their learning. For feedback to work effectively, there must be trust between teacher and learner, and among learners; otherwise comments, supportive or critical, may be wrongly interpreted. The development of a strong sense of mutual trust and respect among members of the learning community is an important long-term goal for teachers.

Students need to be given opportunities to demonstrate their understanding in a variety of learning tasks. Presentations after a group discussion, short reporting after the completion of a worksheet, rewriting lesson outline notes after a debriefing, posting solutions to a problem on the intranet, etc are examples of such tasks. Through assessment of the products of these tasks, feedback can be given by the teacher and obtained from peers for learning progress and construction of knowledge.

Learners' understanding is also dependent on their ability to reflect on their learning and think about their thinking. To promote such abilities, schools should encourage students to be more responsible for their own learning and for reflecting on it, while providing a variety of opportunities for them to work in close partnership and share their views with their peers and teachers.

Chapter 5 Assessment

This chapter discusses the role of assessment in learning and teaching Economics, the principles that should guide assessment of the subject and the need for both formative and summative assessment. It also provides guidance on internal assessment and details of the public assessment of Economics. Finally, information is given on how standards are established and maintained and how results are reported with reference to these standards. General guidance on assessment can be found in the *Senior Secondary Curriculum Guide (SSCG)* (CDC, 2007).

5.1 The Roles of Assessment

Assessment is the practice of collecting evidence of student learning. It is a vital and integral part of classroom instruction, and serves several purposes and audiences.

First and foremost, it gives feedback to students, teachers, schools and parents on the effectiveness of teaching and on student strengths and weaknesses in learning.

Secondly, it provides information to schools, school systems, government, tertiary institutions and employers to enable them to monitor standards and to facilitate selection decisions.

The most important role of assessment is in promoting learning and monitoring students' progress. However, in the senior secondary years, the more public roles of assessment for certification and selection come to the fore. Inevitably, these imply high stake uses of assessment since the results are typically used to make critical decisions about individuals.

The Hong Kong Diploma of Secondary Education (HKDSE) provides a common end-of-school credential that gives access to university study, work, and further education and training. It summarises student performance in the four core subjects and in various elective subjects, including both discipline-oriented subjects such as Economics and the new Applied Learning courses. It needs to be interpreted in conjunction with other information about students provided in the Student Learning Profile.

5.2 Formative and Summative Assessment

It is useful to distinguish between the two main purposes of assessment, namely “assessment

for learning” and “assessment *of learning*”.

“Assessment *for learning*” is concerned with obtaining feedback on learning and teaching, and utilising this to make learning more effective and to introduce any necessary changes to teaching strategies. We refer to this kind of assessment as “formative assessment” because it is all about forming or shaping learning and teaching. Formative assessment should take place on a daily basis and typically involves close attention to small “chunks” of learning.

“Assessment *of learning*” is concerned with determining progress in learning, and is referred to as “summative” assessment, because it is all about summarising how much learning has taken place. Summative assessment is normally undertaken at the conclusion of a significant period of instruction (e.g. at the end of the year, or of a key stage of schooling) and reviews much larger “chunks” of learning.

In practice, a sharp distinction cannot always be made between formative and summative assessment, because the same assessment can in some circumstances serve both formative and summative purposes. Teachers can refer to the SSCG for further discussion of formative and summative assessment.

Formative assessment should be distinguished from continuous assessment. The former refers to the provision of feedback to improve learning and teaching based on formal or informal assessment of student performance, while the latter refers to the assessment of students’ ongoing work and may involve no provision of feedback that helps to promote better learning and teaching. For example, accumulating results in class tests carried out on a weekly basis, without giving students constructive feedback, may neither be effective formative assessment nor meaningful summative assessment.

There are good educational reasons why formative assessment should be given more attention and accorded a higher status than summative assessment, on which schools tended to place a greater emphasis in the past. Research evidence indicates that formative assessment is beneficial when used for refining instructional decision-making in teaching and generating feedback to improve learning. For this reason, the CDC report *Learning to Learn – The Way Forward in Curriculum Development* (CDC, 2001) recommended that there should be a change in assessment practices, with schools placing due emphasis on formative assessment to make assessment *for learning* an integral part of classroom teaching.

It is recognised, however, that the primary purpose of public assessment, which includes both public examinations and moderated School-based Assessments (SBA), is to provide

summative assessments of the learning of each student. While it is desirable that students are exposed to SBA tasks in a low-stakes context, and that they benefit from practice and experience with such tasks for formative assessment purposes without penalty, similar tasks will need to be administered subsequently as part of the public assessment process to generate marks to summarise the learning of students (i.e. for summative assessment purposes).

Another distinction to be made is between internal assessment and public assessment. Internal assessment refers to the assessment practices that teachers and schools employ as part of the ongoing learning and teaching process during the three years of senior secondary studies. In contrast, public assessment refers to the assessment conducted as part of the assessment process in place for all schools. Within the context of the HKDSE, this means both the public examinations and the moderated School-based Assessments conducted or supervised by the HKEAA. On balance, internal assessment should be more formative, whereas public assessment tends to be more summative. Nevertheless, this need not be seen as a simple dichotomy. The inclusion of SBA in public assessment is an attempt to enhance formative assessment or assessment *for* learning within the context of the HKDSE.

5.3 Assessment Objectives

The following assessment objectives are closely aligned with the curriculum framework and the broad learning outcomes presented in earlier chapters. They include:

- (a) to know and understand fundamental economic concepts and theories;
- (b) to apply such concepts and theories to explain real-world situations, especially the Hong Kong economy;
- (c) to understand and interpret economic information presented in various forms;
- (d) to acquire the basic tools of economic analysis;
- (e) to analyse economic issues;
- (f) to evaluate arguments, proposals and policies from different perspectives and make informed judgments;
- (g) to present ideas clearly, and in a well-reasoned manner, illustrating answers with diagrams and examples;
- (h) to participate as informed persons in the discussion of economic issues and decision-making; and
- (i) to become active and responsible citizens and contribute to the well-being of the local community, the nation and the world.

The majority of the above assessment objectives are applicable to both internal and public assessment, while some may not be applicable to public assessment. Those objectives applicable to public assessment will be listed in the approved Regulations and Assessment Frameworks published by the HKEAA.

5.4 Internal Assessment

This section presents the guiding principles that can be used as the basis for designing internal assessment and some common assessment practices for Economics in schools. Some of these principles are common to both internal and public assessment.

5.4.1 Guiding principles

Internal assessment practices should be aligned with curriculum planning, teaching progression, student abilities and local school contexts. The information collected will help to motivate, promote and monitor student learning, and will also help teachers to find ways of promoting more effective learning and teaching.

(a) Alignment with the learning objectives

A range of assessment practices should be used to assess the achievement of different learning objectives for whole-person development which include students' skills in: reflective, critical and creative thinking; comprehension, translation, application, analysis, communication, cooperation, problem-solving, decision-making, organisation and presentation; and synthesis and evaluation. The weighting given to different areas in assessment should be discussed and agreed among teachers. The assessment purposes and criteria should also be made known to students so that they have a full understanding of what is expected of them.

(b) Catering for the range of student ability

Assessment practices incorporating different levels of difficulty and diverse modes should be used to cater for students with different aptitudes and abilities. This helps to ensure that the more able students are challenged to develop their full potential and the less able ones are encouraged to sustain their interest and succeed in learning.

(c) Tracking progress over time

As internal assessment should not be a one-off exercise, schools are encouraged to use practices that can track learning progress over time (e.g. portfolios). Assessment practices of this kind allow students to set their own incremental targets and manage their own pace of learning, which will have a positive impact on their commitment to learning.

(d) Timely and encouraging feedback

Teachers should provide timely and encouraging feedback through a variety of means, such as constructive verbal comments during classroom activities and written remarks on assignments. Such feedback helps students sustain their momentum in learning, and to identify their strengths and weaknesses.

(e) Making reference to the school's context

As learning is more meaningful when the content or process is linked to a setting which is familiar to students, schools are encouraged to design assessment tasks that make reference to the school's own context (e.g. its location, relationship with the community, and mission).

(f) Making reference to current progress in student learning

Internal assessment tasks should be designed with reference to students' current progress, as this helps to overcome obstacles that may have a cumulative negative impact on learning. Teachers should be mindful in particular of concepts and skills which form the basis for further development in learning.

(g) Feedback from peers and from the students themselves

In addition to giving feedback, teachers should also provide opportunities for peer assessment and self-assessment in student learning. The former enables students to learn among themselves, and the latter promotes reflective thinking which is vital for students' life-long learning.

(h) Appropriate use of assessment information to provide feedback

Internal assessment provides a rich source of data for providing evidence-based feedback on learning in a formative manner.

5.4.2 Internal assessment practices

The range of assessment practices outlined below should be used to promote the attainment of the various learning outcomes. However, teachers should note that these practices should be an integral part of learning and teaching, not “add-on” activities.

Open book tests

Open book tests, in which students are allowed access to source materials, are suitable for subjects such as Economics which make use of a wide range of printed materials. Questions for this type of test should aim to stimulate the use of reference materials and help students to organise their ideas.

Oral questioning

Oral questioning need not be seen as a test of spoken language only – it can be helpful in other subjects also. It is a flexible approach which allows teachers to discuss matters in depth with able students, to tease out the meaning of obscure statements, and to find out the reasons for conclusions. Teachers are encouraged to try using oral assessment as it can be a valuable supplement to conventional assessment methods.

Objective questions

Objective questions (e.g. multiple-choice and short-answer questions) can sometimes be useful for assessing memorisation, comprehension, translation, application and analysis, but are less effective for evaluating higher-level cognitive skills such as synthesis and evaluation. In developing such questions to assess students’ grasp of economic concepts, great care must be taken to ensure that they are expressed in a clear and unambiguous way. Also, for multiple-choice questions, all distractors should be plausible so that the correct answers are not too obvious.

Essay-type questions

Free-response and structured essay questions demand that students organise and present information and arguments effectively, and such questions can also be used to assess their ability to synthesise and evaluate. Once again, attention needs to be paid to the wording of the questions so that their scope and the expected responses are clear to students. Imprecise wording can lead to different interpretations, and so fail to achieve the assessment objectives.

Data-response questions

Data-response questions can be employed to assess students' capabilities in application and problem-solving. Materials containing either authentic or hypothetical information – such as statistical tables, graphs, diagrams, pictures, photographs, newspaper reports and extracts from articles – can be used for setting data-response questions so that students' application of their knowledge in real-world situations can be assessed. In setting such questions, teachers are reminded to keep the scenarios clear and precise. All irrelevant text and information should be removed to avoid unnecessary distractions to students.

Project work

Project work is a powerful tool for providing students with opportunities to develop skills in thinking, communication, co-operation, problem-solving, decision-making and presentation; and it can also develop their capacity for self-directed learning. The assessment of students' work should not focus on the final report only, but also on the process of learning.

The preparation of journals by students helps them to keep a record of what they have done, the methods they have used, how they felt about their work, and the learning strategies they adopted to solve problems and concerns. Teachers can make use of the journals to assess their students' strengths and weaknesses so that immediate feedback can be provided to improve their learning. Giving interim presentations on the topics being studied, and responding to classmates' questions on them, promotes students' reflection on their work; and the discussions that follow the presentations allow teachers to talk with students about what they have learned, where they are in the

process of learning, and what they need to explore further.

Portfolios

Portfolios document students' learning and record their overall efforts, progress and achievement. Their assessment should focus on students' reflective, critical and creative thinking, not just on what has been collected. To make effective and meaningful use of portfolios in assessment, teachers can use some predetermined criteria to assess what students have done and the extent to which the artefacts collected document their progress in learning. Also, sessions can be organised regularly for students to share their portfolios; and the feedback provided by both the teacher and classmates can help students to reflect and improve.

In addition to the assessment methods set out above, teachers should take every opportunity to observe closely and note various aspects of students' learning when they are working individually or in groups, such as their work habits and ability to communicate and cooperate. Teachers can share their observations with students and provide positive feedback and encouragement to motivate them further.

In general, whatever assessment method is used, students should be given prompt and constructive feedback to help them learn from their mistakes and adjust their learning strategies where necessary. The assessment methods described in this section are by no means exhaustive, and teachers are free to explore other ways of assessing which suit their instructional objectives.

5.5 Public Assessment

5.5.1 Guiding principles

The principles guiding public assessment are outlined below for teachers' reference.

(a) Alignment with the curriculum

The outcomes that are assessed and examined through the HKDSE should be aligned with the aims, objectives and intended learning outcomes of the three-year senior secondary curriculum. To enhance the validity of public assessment, the assessment procedures should

address the range of valued learning outcomes, and not just those that are assessable through external written examinations.

The public assessment for Economics will place emphasis on testing students' ability to apply their knowledge of economic analysis to practical problems. In addition, the SBA component extends the public assessment to cover generic skills such as creativity and communication skills; and it also helps to assess students' knowledge and skills in tasks which require a longer time for reading and thinking, such as an in-depth analysis of an economic policy.

(b) Fairness, objectivity and reliability

Students should be assessed in ways that are fair and that are not biased against particular groups of students. A characteristic of fair assessment is that it is objective and under the control of an independent examining authority that is impartial and open to public scrutiny. Fairness also implies that assessments provide a reliable measure of each student's performance in a given subject so that, if they were to be repeated, very similar results would be obtained.

(c) Inclusiveness

The HKALE is designed for a relatively elite group of students, most of whom aspire to university study. However, the assessments and examinations for the three-year senior secondary curriculum will accommodate the full spectrum of student aptitude and ability.

The senior secondary Economics curriculum places emphasis on a balance between breadth and depth of economic understanding, and between theory and application. The public examination will contain questions that test students' knowledge of the fundamental and selected areas of economics, and also higher-order thinking skills. At the same time, the SBA component offers room for a wide choice of real-life exploration to cater for the differing preferences and readiness among students and/or schools.

(d) Standards-referencing

The HKDSE is "standard-referenced", i.e. student performance will be matched against standards which indicate what students have to know and be able to do to merit a certain level of performance.

(e) Informativeness

The new qualification and the associated assessment and examinations system should provide useful information to all parties. Firstly, it should provide feedback to students on their performance and to teachers and schools on the quality of the teaching provided. Secondly, it should communicate to parents, tertiary institutions, employers and the public at large what students know and are able to do, in terms of how their performance matches the standards. Thirdly, it needs to facilitate selection decisions that are fair and defensible.

5.5.2 Assessment design

The assessment design (refer to Table 5.1) is subject to continual refinement in the light of feedback. Full details will be provided in other supplementary documents, in particular the approved Regulations and Assessment Frameworks for the year of the examination.

Component	Part	Weighting	Duration
Public Examination	Paper 1 (multiple-choice questions)	25%	1 hour
	Paper 2 (conventional paper) Part 1: Compulsory Part Part 2: Elective Part (a choice of one out of two electives)	60%	2 hours
School-based Assessment (SBA)	Task-based assessment (news commentary or essay/report)	15%	

Table 5.1: Components of the public assessment for Economics

5.5.3 Public examinations

The overall aim of the public examination is to assess students' ability to demonstrate their knowledge and understanding of the basic theories of Economics, and to apply them to hypothetical and empirical situations.

Different types of items will be used to assess students' performance in a broad range of skills and abilities. The types of items will include multiple-choice questions, short questions, data-response questions and structured/essay-type questions. Item types will be similar to those adopted in the HKCE and HKAL examinations. Specimen papers will be provided to schools by the HKEAA to illustrate the format of the examination and the standards at which

the questions are pitched.

5.5.4 School-based Assessment (SBA)

In the context of public assessment, SBA refers to assessments administered in schools and marked by the student's own teachers. The primary rationale for SBA in Economics is to enhance the validity of the assessment by including the assessment of those generic skills not so easily assessed in the public examination.

There are, however, some additional reasons for SBA in Economics. For example, it reduces dependence on the results of public examinations, which may not always provide the most reliable indication of the actual abilities of candidates. Assessments based on student performance over an extended period of time and developed by those who know the students best – their subject teachers – are more *reliable*.

Another reason for including SBA is to promote a positive *backwash effect* on students, teachers and school staff. In Economics, SBA can serve to motivate students by requiring them to engage in meaningful activities; and for teachers, it can reinforce curriculum aims and good teaching practice, and provide structure and significance to an activity they are in any case involved in on a daily basis, namely assessing their own students.

Task-based assessment: assessment based on students' performance in the tasks of news commentaries or essays/reports

The tasks can take the form of a news commentary or an essay/report. Students are required to complete a stipulated number of economic analyses, investigations, or explorations, and produce a written report on each of the tasks performed.

This mode of assessment is very relevant to the study and application of the subject-matter. The level of difficulty can range widely from elementary training to rather sophisticated studies in doing economic analysis and evaluation. This mode of assessment is reported by some schools as being practical and effective for the training of students' observation and self-learning skills. Consideration has also been given to the comparability of the different forms of this assessment mode to ensure fairness among different schools and among different students in the same school.

It should be noted that SBA is not an "add-on" element in the curriculum. The above mode of SBA is normal in-class and out-of-class activities suggested in the curriculum. The

requirement to implement the SBA will take into consideration the wide range of student ability and efforts will be made to avoid unduly increasing the workload of both teachers and students. Detailed information on the requirements and implementation of SBA and samples of assessment tasks will be provided to teachers by the HKEAA.

Authentication measures

Students will do the assessment tasks under their teachers’ supervision. Forty hours of class time will be sufficient for them to carry out SBA. Some schools may allow students to collect information outside regular lessons, but in such cases students must carry out the planning and execution of much of their work in class under teacher supervision to ensure that it is their own work. Other authentication measures include questioning by teachers, presentations by students in class and the keeping of logbooks.

Implementation schedule

To allow time for teachers to familiarize themselves with the administration of the SBA, the following strategy for phasing it in will be adopted:

Year of examination	Implementation of SBA
2012	Schools are not required to submit SBA marks. The public examination results constitute 100% of the final subject results.
2013	Schools are not required to submit SBA marks. The public examination results constitute 100% of the final subject results.
Starting from 2014, all schools have to submit SBA marks contributing 15% of the final subject results.	

Table 5.2: Implementation schedule of SBA

5.5.5 Standards and reporting of results

The HKDSE will make use of standards-referenced reporting of assessments. What this means is that candidates’ levels of performance will be reported with reference to a set of standards as defined by cut scores on the variable or scale for a given subject. Standards

referencing relates to the way in which results are reported and does not involve any changes in how teachers or examiners mark student work. The set of standards for a given subject can be represented diagrammatically as shown in Figure 5.1.

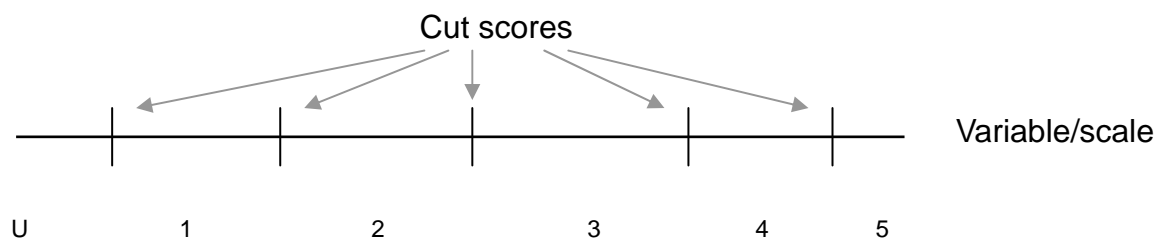


Figure 5.1 *Defining levels of performance via cut scores on the variable or scale for a given subject*

Within the context of the HKDSE there will be five cut scores, which will be used to distinguish five levels of performance (1–5), with 5 being the highest. A performance below the threshold cut score for Level 1 will be labelled as ‘Unclassified’ (U).

For each of the five levels, a set of written descriptors will be developed that describe what the typical candidate performing at this level is able to do. The principle behind these descriptors is that they describe what typical candidates *can* do, not what they *cannot* do. In other words, they describe performance in positive rather than negative terms. These descriptors will necessarily represent ‘on-average’ statements and may not apply precisely to individuals, whose performance within a subject may be variable and span two or more levels. Samples of students’ work at various levels of attainment may be used to illustrate the standards expected of them. These samples, when used together with the level descriptors, will clarify the standards expected at the various levels of attainment.

In setting standards for the HKDSE, Levels 4 and 5 will be set with reference to the standards achieved by students awarded grades A–D in the HKALE. It needs to be stressed, however, that the intention is that the standards will remain constant over time – not the percentages awarded different levels, as these are free to vary in line with variations in overall student performance. Referencing Levels 4 and 5 to the standards associated with the old grades A–D is important for ensuring a degree of continuity with past practice, for facilitating tertiary selection and for maintaining international recognition. Secure monitoring tests will be used to ensure equivalence of standards over time.

The overall level awarded to each candidate will be made up of results in both the public

examination and the SBA. SBA results for Economics will be statistically moderated to adjust for differences among schools in marking standards, while preserving the rank ordering of students as determined by the school.

To maintain current levels of discrimination for selection purposes, the Level 5 candidates with the best performance will have their results annotated with the symbols ** and the next top group with the symbol *. The Diploma itself will record the Level awarded to each candidate. There will also be a Statement of Results which will in addition provide level descriptors.

Chapter 6 Learning and Teaching Resources

This chapter discusses the importance of selecting and making effective use of learning and teaching resources, including textbooks, to enhance student learning. Schools need to select, adapt and, where appropriate, develop the relevant resources to support student learning.

6.1 Function of Learning and Teaching Resources

The function of learning and teaching resources is to provide a basis for students' learning experiences. They include not only textbooks, workbooks and audio-visual teaching aids produced by the Education and Manpower Bureau or other organisations, but also web-based learning materials and computer software, the internet, the media, libraries, resources in the natural environment, and people. All of these resources should be drawn upon to help students to broaden their learning experiences and meet their different learning needs. If used effectively, they will help students to consolidate what they have learned, extend and construct knowledge for themselves, and develop the learning strategies, generic skills, values and attitudes they need – and thus lay a solid foundation for life-long learning. These resources can also enhance learners' motivation, provide support to them and allow them to gradually take more control of their learning, so that they become more effective self-directed learners.

6.1.1 Learning and teaching resources in economics

Teachers should select and adapt cases that highlight social issues and controversies, as this helps students to build connections with the world they live in. The use of such examples from news reports, magazines, television, the internet, books and other publications can enhance meaning and knowledge construction in the subject. Teachers should build up a personal library of cases which illustrate the relevance of economic concepts to human interaction and decision-making. Some examples are given below:

Example 1: Gift or discount coupons

Newspapers sometimes offer gift or discount coupons, and some of these coupons can be used by students to make predictions about the reactions of consumers. For example, they can make predictions about whether queues will form, what the pattern of age distribution of people in the queues will be and reasons for such a pattern.

Students can then try to find out whether or not their predictions are correct. Concepts such as excess demand and cost can be developed in this way.

Note: Students may observe queues of people waiting to redeem coupons at shops.

Example 2: Cartoons in newspapers and magazines

A cartoon from an international magazine depicts China as a new major consumer of petroleum. It can be used by students to examine the consequences of the country's economic development on the world economy. An issue-enquiry mini-project might be proposed by students on emission policy for power-generating plants in a certain country and the impact on the environment.

Example 3: Pricing strategies of business organisations

Ocean Park Hong Kong and Hong Kong Disneyland can be objects for economic analysis for various topics. For instance, the issue of an annual pass or one-day ticket by Ocean Park can be used for studying consumer surplus and pricing strategies at Ocean Park; and, likewise, the pricing of food and restaurant services in Disneyland can be used to illustrate the same concepts, with those in Ocean Park as a contrasting example. Other concepts such as sources of monopoly power, substitutes, and fixed costs and variable costs can also be developed using examples of the pricing and marketing strategies of the two parks.

Some resources for learning and teaching Economics are specially designed for certain topics or learners. For example, the Curriculum Development Institute, tertiary education institutions, and some government departments, non profit-making organisations and teacher associations provide various resources that can help both teachers and students; and some organisations in the commercial field, especially textbook suppliers, produce materials to support teachers. Useful materials for teachers and students are also available from various sites on the internet.

As learners have different strengths and learning habits, teachers should expose students to a wide range of learning resources. Some may incorporate interesting cases; some may have direct relevance to students' aspirations; and some may even be straightforward practice and drill exercises. Through observing how students interact and make meaning from these

resources, teachers gradually develop the sensitivity and professional knowledge needed to design and use resources appropriately for student learning.

Students can also play a part in the process. If they are encouraged to read about various social and economic issues and browse for information on the internet, they will raise questions for their peers and teachers more often, and provide teachers with more information than they have the time and resources to gather.

6.2 Guiding Principles

Some basic considerations in the selection of textbooks and other learning and teaching resources are as follows. They should:

- (a) be in line with the curriculum aims and contain core elements of the curriculum;
- (b) arouse students' interest and engage them actively in learning tasks;
- (c) take students' prior knowledge and readiness into consideration;
- (d) provide access to knowledge, as well as scaffolding, to help students progress in their learning;
- (e) cater for students' learning differences by providing a variety of learning activities at different levels of difficulty;
- (f) promote independent learning by complementing and extending what students have learned in class;
- (g) promote discussion and further inquiry, and make suggestions for student reflection; and
- (h) be expressed at a language level suitable for the learners.

More specifically, teachers should take the following points into consideration when choosing cases and examples for the study of economics:

- (a) They should be relevant to the concepts or ideas to be learned.
- (b) They should be clear, so that students are able to identify the key features of the concepts involved. Examples which involve any ambiguity should not be used for concept attainment, particularly at the early stages of learning.
- (c) Students should be familiar with, or be able to comprehend, the cases and examples selected.
- (d) Interesting, authentic and novel cases are usually more effective in engaging students' interest.

Resources and materials should not be viewed as a substitute for the teacher, but should complement his/her work and give further support to student learning. Teachers should help students to build their own knowledge structures and develop the focuses of their studies.

6.3 Commonly Used Resources

6.3.1 Textbooks

Well-designed economics textbooks help students to get an overview of the relevant content and concepts in the curriculum. Textbook examples and illustrations, exercises and suggestions for further investigation and learning methods can enhance students' understanding. However, while textbooks give a structured representation of the relevant economic knowledge in text form, students are likely to need the teacher's guidance in constructing and applying knowledge derived from textbooks. Overall, textbooks and notes should be used to consolidate the knowledge developed through students' active participation in learning activities. They should not be a substitute for learning activities as written texts do not normally correspond directly to students' learning experiences.

Teachers must exercise care in the selection of textbooks. A textbook's coverage and presentation of concepts has to be gauged in the light of students' language ability, motivation, understanding of graphics and figures, etc.

Teachers should refer to the following documents in selecting textbooks for their students:

- *Recommended Textbook List*
- *Guiding Principles for Quality Textbooks*
- *Notes on Selection of Textbooks and Learning Materials for Use in Schools*

(<http://www.emb.gov.hk>; then > Kindergarten, Primary and Secondary Education > Curriculum Development > Textbook Information)

6.3.2 Reference material

Some of the important reference materials specific to senior secondary Economics curriculum are listed in the References section of this Guide. However, knowledge relevant to economics learning and teaching is expanding rapidly and teachers are encouraged to keep abreast of the latest resources.

6.3.3 The library

The school library should provide easy access to reading materials and media that support students in their learning of economics. Books, magazines, video programmes, newspaper clippings, etc are indispensable for students' general reading and viewing. Teachers' assigned tasks such as enquiry studies or news commentaries could be supported by the establishment of a reference section storing materials for students' access. The Economics teacher should work collaboratively with the school librarian for the development of this reference section. More importantly, the teacher should actively encourage students to develop the habit of visiting, browsing and searching for information in the library. The public libraries can also play a part in providing an alternative access to information for students. Teachers could provide instructions or tasks for their students to benefit from the support by the public libraries.

6.3.4 Technology and web-based resources

The massive increase in the quantity of information available today has led to new approaches to learning and teaching. Teachers can act as facilitators of learning by helping students to search for information and connect the information with students' acquired knowledge.

The internet and technology help learning by:

- (a) providing audio-visual aids for understanding difficult concepts;
- (b) providing access to information from a wide range of sources and processing large quantities of information;
- (c) allowing students to work at their own pace with the use of specially designed software;
- (d) promoting interaction among students, resources and teachers;
- (e) promoting collaboration between students and teachers; and
- (f) facilitating the acquisition of information, the development of critical thinking and knowledge construction, given suitable guidance.

There are now many websites devoted to economic analysis, the application of economics to various issues and economics education. Teachers may use them to support their students' learning. Some of these websites provide data and information, such as government websites, and others include expert views and platforms for exchanging ideas. There are also other relevant sites with different target users. Sites from newspapers or media corporations are important sources for recent and archived materials. Given the multitude of sources, students should be advised on how to choose and use them.

6.3.5 Community resources

Many parties can contribute in different ways to helping students learn economics effectively. Some examples of the specific roles of various relevant parties are suggested below.

(1) Parents

Parents are one of the key stakeholders in economics education and most of them have direct experience of the world of work and make consumption, production and investment decisions very often. Teachers may mobilise parents for helping students to learn economics. For instance, teachers may encourage parents to discuss economic and social issues with their sons and daughters; arrange thematic talks to be conducted by parents on different careers, work experiences and problems they have faced in the business world; or even, if possible, enlist parents' support in student revision after school.

The design of economics learning activities can also involve parent participation, particularly when the activities relate to controversial cases that are of concern to parents.

Example

Teachers may ask students to seek parents' views on minimum wage. Also, the opinions of parents in Sheung Shui might be sought on the issue of locating the centralised slaughter facilities for poultry in the North District, and their views can be contrasted with those of parents from another district, such as Tai Po. This exercise may give rise to discussions on cost-benefit analysis, and economic and political factors. Furthermore, a mini-project about parents' views on the importance of their sons' or daughters' education may bring about some interesting ideas.

(2) Alumni

Past students can be a rich source of expertise and experience for economics students in a range of areas. Teachers may invite graduates to share their experiences for helping students to see the connection between economic knowledge and the real world. For example, experience of graduates who are now entrepreneurs can help students to have a deeper understanding of the topics of business ownership and the role of entrepreneurs, and the sharing of graduates who work in the financial sector can let students see the importance

of this sector to the Hong Kong economy.

(3) Community organisations

Various community organisations have resources and knowledge relevant to the study of economics. Teachers can guide students to obtain information from such organisations to support their learning. However, students should be helped to get to know the nature and background of the organisations, so that they have a clear view of how to use and interpret the information, and can detect any possible biases or incomplete information in their analysis of economic and social issues.

(4) Government departments and non-government organisations

These departments and organisations are rich sources of support for student learning. Some of the organisations that teachers may consider in planning their learning and teaching activities are listed below:

- (a) The Census and Statistics Department provides a great deal of useful social and economic data which students can use to illustrate or test theories they have learned. For example, they can use data on price levels, Gross Domestic Product and money supply to illustrate the Quantity Theory of Money. Teachers may also use the data to illustrate some abstract economic concepts, such as the use of income statistics to illustrate income inequality.
- (b) Some non-government organisations offer many high-quality programmes free-of-charge to schools. For example, students may participate in games or competitions in which they compete as managers of businesses in a simulated market. Through participating in these programmes, students may experience the working of the business world and apply their economic knowledge to solving real business problems.
- (c) Other statutory or government-funded organisations such as the Consumer Council, Hong Kong Productivity Council and Hong Kong Trade Development Council contribute in different areas, and can provide useful information on topics such as consumer protection, competition policy, trade policy and the Hong Kong economy.

(5) Business organisations

Many business organisations now welcome visitors and enquiries from the public. Arranging visits to the facilities of some of these organisations can stimulate students to generate issues for enquiry.

Example: Visits to business organisations

Visits to power stations can sensitise students to cost considerations in using alternative fuels for power generation; and the topic of emissions and pollution can be another issue for consideration. In relation to CLP Power Hong Kong Limited, the export and import of electricity is an interesting area for students to examine, and the structure of ownership of the electricity supply lines and the power stations can also be quite intriguing if students are alerted to the facts.

Some organisations can provide data and information for use in in-depth studies.

Example: Data provided by business organisations

The arrangements for the merger of the systems of the MTR Corporation Limited and the Kowloon-Canton Railway Corporation offer many areas on which students can carry out independent studies. For instance, they can use information gathered directly from these corporations to examine the planned fare reduction package and analyse the reasons for differential reductions for different routes or trips.

Teachers should give assistance and guidance to students about etiquette in contacting business organisations, which is a learning objective for preparing students for adulthood.

(6) The media

The media are one of the major sources of information and views for students. They have a strong influence on the functioning of a modern society as they provide an interface between individuals and the social milieu in which people live and create meaning. However, teachers should guide students in the proper use and interpretation of information and commentaries from this source. Economic tools of analysis should be used to help students to detect bias, prejudice and uninformed decisions or comments.

Teachers can also use relevant reports, articles and productions from the media for the learning and teaching of a variety of issues and events. With appropriate guidance, well-designed activities involving the media can develop students' economic understanding. For instance, programmes produced by local television broadcasting companies, articles in newspapers and journals can be used to get students to discuss current social issues and gain

exposure to a variety of perspectives on topics such as efficiency and equity.

Example: Reports from the media

For a study of poverty, investigative TV reports on “cage homes” in Sham Shui Po can be used to promote discussion, and the causes and consequences of income inequality can then be studied.

(7) Teacher community

Membership of professional organisations can contribute to teachers’ development by providing a platform for knowledge generation and exchange. Increased opportunities for teachers to interact are needed to break the sense of isolation experienced by some Economics teachers, who have only one or two colleagues to discuss their ideas on learning and teaching strategies and activities with. Sharing experiences strengthens their sense of belonging to a professional community.

6.4 Flexible Use of Learning and Teaching Resources

In choosing from the wide variety of learning and teaching materials available, teachers need to take into account such factors as the nature of the topic, their students’ characteristics, and their own pedagogical concerns. Such resources therefore need to be employed flexibly and in this respect teachers’ professional judgment is critical.

Example

On the topic of the law of diminishing marginal returns, a teacher decides that a knowledge construction simulation game would suit her students. In this case, the textbook serves as reading material after the activity and the debriefing.

For another topic on the effect of lifting the textile quota restriction on Hong Kong, the same teacher asks students to do pre-reading on textbook articles, supplemented with other materials students have found on the internet. In the lesson, the students have to discuss and present their views on the issue; and after a teacher summary at the end of the lesson, they then have to read the relevant paragraphs in the textbook and prepare lesson notes themselves.

Finally, on the topic of the taxation system in Hong Kong, which is descriptive in nature, the teacher uses an interlaced approach. Students in groups read different parts of the relevant textbook chapter and explain the main issues to the others in the group. Selected groups are then invited to present their summaries of the topic; and students have to read the chapter after the lesson.

Variation in student ability suggests the need to expand the sources of resources and vary the way they are used in class.

Example

In a class with students whose academic abilities are very diverse, heterogeneous learning groups can be formed for learning activities. Suitable assignment of roles to group members provides the necessary structure for learning through tasks; and hands-on activities with considerable teacher support and debriefing can make learning manageable even for the less able students.

For students who are more able, teachers can pose challenging tasks for enquiry. Prescribed readings and resources on the internet are needed, and schools may also try to enlist resource persons from their alumni or parents to serve as mentors to the students. These students can also be encouraged to play an active role in supporting their classmates in group learning activities.

6.5 Resource Management

The culture of sharing is the key to the success of knowledge management. Schools should make arrangements for:

- teachers and students to share learning and teaching resources through the intranet or other means within the school; and
- teachers to form professional development groups for the exchange of experience.

Face to face or electronic sharing among Economics teachers in different schools is strongly encouraged. As noted above, the small number of Economics teachers in any one school (it seldom exceeds three) limits their opportunities for generating pedagogical knowledge. Cross school collaboration, which is particularly convenient for schools within the same

sponsoring organisation, allows teachers to consider possible alternative approaches, which, if implemented, can lead to enhanced learning and teaching. Information technology offers more options for knowledge exchange and development with fewer time and logistical constraints, such as shared viewing of an Economics lesson on the internet.

6.5.1 Resource management in schools

Learning and teaching resources such as articles for student reading, materials for learning activities and test banks for diagnostic and formative purposes need to be effectively managed to facilitate good practices. The following guidelines can help teachers to manage resources effectively:

- (a) A classified catalogue of resource materials may be built up through a team effort by the Economics panel. The resource pool may include newspaper cuttings, teacher-designed worksheets, information packs or even projects produced by students. A systematic cataloguing system allows the materials to be easily retrieved to support different teaching methods.
- (b) The school intranet can be used to store and share teaching materials.
- (c) Teachers can develop a test bank for formative and summative purposes. Assessment items suitable for student self-directed learning can be transferred to a student self-access database in the school intranet system. The items in the bank can include information about error percentages for options, explanations of the correct answers and assistance for misconceptions associated with distractors. In this way, students can get immediate feedback.
- (d) A system should be developed for regular evaluation of learning and teaching activities and their associated resources. This helps in selecting practices and resources that work, and makes their storage and retrieval manageable.

6.6 Conclusion

In general, Economics teachers should consider extending their role as facilitators of student learning rather than just transmitting knowledge. This entails being fully aware of the relevant materials for student learning. Economics teachers therefore need to be knowledgeable about current events in Hong Kong, the mainland and the world to select appropriate cases from newspapers, the internet and the media; and in utilising them, they have to be skilled resource persons and designers of appropriate learning contexts to support student learning.

Example of Teaching Sequence 1:
Classes of students with diverse abilities and aptitudes

Student's connection with the world

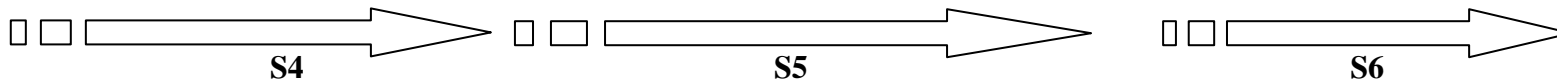
making personal choices
markets for consumer goods
economic fluctuation and growth
price level and changes
income distribution
decision on allocation -> study and play
career choices labour market
behaviour of agents, firms and government in events and issues
world of work rights and responsibilities

learning through cases, projects, participation, etc.

students interact with peers, teacher, learning contexts to construct knowledge

Examples of key organising concepts

decisions at the margin output and growth
scarcity aggregate demand allocation price medium of exchange comparative advantage
valuing cost demand supply distribution mutually beneficial trade
production consumption exchanges aggregate supply equity human capital institutions
efficiency knowledge and innovation rules



A Basic Economic Concepts

B Firms and Production

D Competition and Market Structure

F Measurement of Economic Performance

G National Income Determination and Price Level

C Market and Price

H Money and Banking

I Macroeconomic Problems and Policies

E Efficiency, Equity and the Role of Government

J International Trade and Finance

Elective Part 1 OR Elective Part 2

Example of Teaching Sequence 2:
Classes of students with better academic foundation

Student's connection with the world

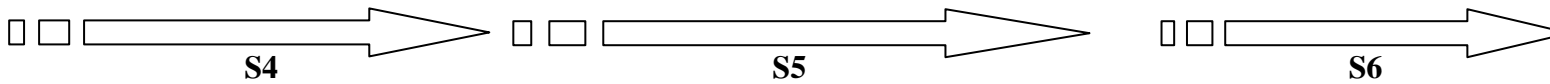
making personal choices
 markets for consumer goods
 decision on allocation -> study and play career choices
 economic fluctuation and growth
 price level and changes
 labour market
 world of work rights and responsibilities
 income distribution
 behaviour of agents, firms and government in events and issues

learning through cases, projects, participation, etc.

students interact with peers, teacher, learning contexts to construct knowledge

Examples of key organising concepts

decisions at the margin allocation price output and growth medium of exchange comparative advantage
 scarcity demand supply aggregate demand distribution mutually beneficial trade
 valuing cost incentives aggregate supply equity human capital institutions
 production consumption exchanges aggregate supply efficiency knowledge and innovation rules



- A Basic Economic Concepts
- B Firms and Production I
- C Market and Price
- F Measurement of Economic Performance
- G National Income Determination and Price Level
- H Money and Banking
- I Macroeconomic Problems and Policies
- D Competition and Market Structure
- E Efficiency, Equity and the Role of Government
- B Firms and Production II
- J International Trade and Finance
- Elective Part 1 OR Elective Part 2

Examples of Enquiry Approaches in Economics

Enquiry through Inductive Approaches

This is a frequently used strategy, the success of which depends heavily on having suitable examples to form the basis for understanding. Students are given the opportunity to extract the key features of a concept from the examples. It is an inductive process which helps to develop students' higher-order thinking skills.

Example

When teaching the topic of market structure, a teacher in a Tai Po school asked students to collect information on the services provided by mobile phone service operators. In class, students' task was to find the common characteristics of these services. They had to use enumerating, listing, grouping and concept labelling skills to complete the task. The teacher provided some guidelines such as "How similar are their products?" during the activity. Then differences in their services or product appeals had to be identified, after which the teacher guided students to work out the major features of this market. The features might include "product differentiation", "non-price competition", and "barriers to entry".

Learning through Participation and Discovery

For many economics topics, teachers can design a setting in which students perform some tasks and interact with their peers so that economic concepts and ideas can be experienced or generated. Games and role-plays are some of the frequently used activities. There are many games designed for constructing concepts such as "division of labour", "trade", "barter", "scarcity", and "opportunity cost". Role-play is sometimes used to help students to see how different roles make their decisions on controversial issues. The use of such activities can help students to learn through participation.

Example 1

A school in Tin Shui Wai adapted the lesson plan on “gains from trade” posted by the CDI, EMB on its website. Students were given items for them to trade among themselves. In the process, they found that they were better-off if they were allowed to trade. In the debriefing phase, most of the intended learning objectives were achieved.

(http://www.emb.gov.hk/FileManager/EN/Content_4982/econ_s4_5_wto2_eng.doc)

Example 2

A business plan proposal

A school in Yuen Long encouraged students to draw up a business plan in order to have a more in-depth understanding of the considerations involved when starting up a business. One of the groups proposed a “Poon Choi” (basin meal) business. In their plan, they made interesting analysis of the strengths and weaknesses of their competitors.

Example 3

Some schools join lower-stake business stalls sponsored by companies or non-profit making organisations. Students get a taste of what it is like to be an entrepreneur in the process.

Issue-enquiry Approach

Teachers can make use of many economic issues to develop students’ analytical, collaboration and communication skills through enquiry, and there are many variations in the design of such activities. For example, teachers can provide sufficient background information on an issue and leave the task of enquiry to the students. Students then have to apply their economic knowledge to identify the nature and causes of the issue, and possibly suggest solutions.

Example 1

In 2004, the premium paid by the developer of the Hung Hom Peninsular Private Sector Participation Scheme project for allowing it to dispose of the flats in the open market has sparked off public controversy.

This is an interesting case for teachers of Economics to design an enquiry into this subject, in which students may touch on the issues of opportunity cost, property rights, and equity.

Example 2

The media reported that patients started queueing at some public clinics before dawn. A teacher designed an enquiry into this issue. He collated articles and reports from the press, background information on fees and other relevant information for the students. Students had to explain the reasons for the queues and why there was no easy solution to this problem.

On the other hand, students may start from learning about a social phenomenon, and then work out the nature of the issue through collecting information and reading relevant reports. The teacher gives support throughout the process.

Example 3

An issue-enquiry about the costs and benefits of the Three Gorges Project could be a long term study project in which students have to collect relevant information and set a focus for enquiry. They gradually go into the issue more deeply as they gain access to more detailed information.

Using a Spreadsheet to Analyse the Weaknesses of Student Learning

Answers of all students to each question in a test are entered in a spreadsheet. The data which has been sorted is shown in the spreadsheet below:

Student number	Question number														
	Q6	Q9	Q1	Q11	Q7	Q13	Q2	Q14	Q15	Q5	Q8	Q12	Q10	Q4	Q3
10	D	C	C	D	A	C	B	B	B	C	D	A	C	C	D
21	D	C	C	D	A	C	B	B	B	C	D	C	C	C	D
30	D	C	C	D	A	C	B	B	B	B	D	A	C	C	D
6	D	C	C	D	A	C	B	B	B	C	D	A	D	A	A
34	D	C	C	D	A	C	B	B	B	C	D	D	B	A	C
17	D	C	C	D	D	C	B	B	B	A	D	A	B	A	C
22	D	C	C	D	A	C	B	B	B	B	D	B	C	A	A
2	D	C	C	D	A	C	A	B	B	C	C	A	A	A	C
29	D	C	C	D	A	C	B	B	A	C	B	B	C	B	C
42	D	C	C	D	A	C	B	B	B	C	D	D	A	A	A
1	D	C	C	D	A	C	B	B	B	C	B	A	A	B	D
18	D	C	C	D	A	C	B	B	B	C	C	B	C	A	D
35	D	C	C	D	A	C	B	B	A	B	B	A	A	C	C
31	D	C	C	D	A	C	B	B	B	B	C	B	C	C	A
9	D	C	C	D	A	C	B	B	B	C	B	A	A	A	D
41	D	C	C	D	A	C	A	B	B	C	D	D	B	A	D
23	D	C	C	D	A	C	B	B	B	A	A	B	A	D	C
3	D	C	C	D	A	D	B	A	C	C	C	A	C	C	A
28	D	C	C	D	A	B	B	B	B	C	C	C	A	C	D
7	D	C	C	D	A	C	B	B	B	C	C	B	B	D	D
40	D	C	C	D	A	C	B	D	B	C	B	A	A	D	A
32	D	C	C	D	A	C	B	B	B	C	C	D	A	B	A
19	D	C	C	D	A	C	B	C	B	A	D	B	B	C	D
11	D	C	C	D	A	A	B	B	B	D	D	B	D	A	C
39	D	C	C	D	A	C	B	A	B	C	C	D	B	C	A
27	D	C	C	D	A	B	B	B	B	C	C	A	D	A	D
36	D	C	C	D	A	C	A	B	B	C	B	D	C	A	D
4	D	C	C	D	A	D	B	B	B	D	D	B	A	A	D
33	D	C	C	D	A	C	C	A	A	C	B	A	C	B	A
12	D	C	C	D	A	C	C	B	A	C	D	D	B	A	D
20	D	C	C	D	A	A	B	C	D	C	D	D	C	A	B
15	D	C	C	D	A	C	B	A	C	C	B	A	D	A	D
24	D	C	C	D	A	C	B	A	B	A	B	B	C	A	B
16	D	A	A	B	A	C	B	B	A	A	D	B	C	C	A
5	D	C	C	D	A	C	D	B	A	C	D	B	D	A	A
37	D	C	C	A	D	C	B	C	B	C	B	D	A	C	D
8	D	C	C	D	C	C	B	A	A	D	D	D	A	A	C
38	D	B	D	D	C	C	B	A	B	A	C	A	B	A	C
13	D	C	C	B	A	C	C	B	D	C	A	B	A	C	A
26	D	C	C	B	A	C	B	C	D	C	C	B	A	C	A
25	D	C	C	D	D	D	D	B	C	C	C	A	B	A	D
14	D	C	C	D	B	C	B	B	A	B	A	B	A	B	D
Correct Ans	D	C	C	D	A	C	B	B	B	C	D	A	C	C	C
Correct %	100%	95%	95%	90%	86%	83%	81%	71%	67%	67%	40%	36%	31%	31%	21%

The shaded cells are the correct answers. Each column in the spreadsheet shows the answers of all students to a particular question, and the columns are arranged in such an order that the question with the highest number of correct responses appears in the first column from the left, and the question with the least number of correct responses in the last column. In other words, questions that most students tend to have difficulties in getting the correct answer concentrate on the right-hand side of the spreadsheet.

Each row shows the answers of a particular student to each question, and the rows are arranged in such an order that the student with the highest total score appears in the first row from the top, and the student with the lowest total score in the last row. In other words,

weaker students concentrate at the bottom of the spreadsheet.

The spreadsheet above provides teachers with useful information on the efficacy of individual questions and students' weaknesses. The teacher may conduct further investigations into the reasons why students made mistakes in particular questions, with an attempt to find out if such mistakes have any connection with learning and teaching, or the layout of questions in the test.

For example, the teacher may notice the strange situation in Question 13, in which many students of average ability made a mistake but most weaker students managed to get the correct answer. The teacher can arrange diagnostic interviews with students to discover the reasons for such an unusual situation.

Points to Note in Debriefing

- 1 Students should present their work using a form of representation they are accustomed to, like a concept map or graphic organiser, or an oral presentation with an outline projected on a screen. Such presentations are important to foster students' ownership and accountability.
- 2 The teacher then invites questions and comments from the audience, but should refrain from giving any conclusive or definitive views at this point. The presenters have to address the questions raised and propose modifications, if any, to their findings.
- 3 The teacher can provide expert input on how to address the queries or suggest alternative viewpoints for the students to consider. However, the students should be allowed to see the critical points for themselves and provide answers to the queries. It would be relatively easy and time-saving for the teacher to give answers directly, but this would defeat the purpose of student enquiry: students will tend to spend less time and effort in thinking about and tackling challenging issues if they expect their teacher to give an authoritative debriefing at the end of the event. Of course, there may be occasions when the teacher has to give direct responses because the presenters have limited knowledge or have strayed from the topic under consideration, but this should be exceptional. In cases such as this, ways of improving the design of the enquiry, such as assigning more relevant reading materials to students or improving monitoring during the process of enquiry, should be considered.
- 4 The student group should then prepare a final version of their findings, highlighting the improvements made to other learners.
- 5 The teacher can consider asking each learner to produce a journal to document his/her progress, in order to develop the habit of reflection and self-monitoring. However, the design of journals should be user-friendly so that it does not impose too heavy a burden on the learners.

An Excerpt from the Debriefing of a Learning Activity

The following are some of the student responses during the debriefing phase after the game on hat production:

Sam: Our group can produce more hats than the other groups because we work fast.

Teacher: Why can you work so fast?

Sam: Er... We worked hard. Er... We cooperated well.

Teacher: Can you explain more clearly? How could your group produce nine hats while Mary's group produced only three?

Sam: Er ... (silence)

.....

Teacher: Mary, what did you tell the class just now?

Mary: We had 10 unfinished hats. Ada was a bit slow in painting the hat. Some of us made too many hats.

Teacher: Any suggestions for explaining your group's accomplishment? (inviting Sam's group members)

Elizabeth (from Sam's group): Peter painted hats fast. John also helped in painting hats.

.....

In this example, the concepts of coordination, suitable work assignment and proficiency at work all surfaced in the students' responses. A teacher has to help students to focus on each of the main concepts by pinpointing the key elements from student responses and then ask them to elaborate. A possible line of development might look like this:

Teacher: Mary, can you comment on the difference between your group and Sam's group concerning the painting of hats?

Mary: We just had Ada for painting hats while they had two members. Our group members don't like painting hats. We like to practise folding hats. Our group leader said it is OK and let us do what we liked.

Teacher: Peter, you are the group leader. Why did you have two workers doing the painting?

Peter: At first, only John painted the hats. Later on, I found this was too slow. So I quit folding hats and started painting them. I also asked Elizabeth to help to draw the pattern instead of folding hats. We wanted to win.

Teacher: Class, what is necessary for effective division of labour?

Jim: We need good arrangements. Slow steps need more workers.

Teacher: Does anyone have a term for Jim's idea?

Alvin: Coordination.

(The teacher showed approval and put the word on the blackboard.)

Teacher: What can we say about Peter's role?

.....

Glossary

<u>Term</u>	<u>Description</u>
Applied Learning (ApL, formerly known as Career-oriented Studies)	Applied Learning (ApL, formerly known as Career-oriented Studies) is an essential component of the senior secondary curriculum. ApL uses broad professional and vocational fields as the learning platform, developing students' foundation skills, thinking skills, people skills, values & attitudes and career-related competencies, to prepare them for further studies and / or for work as well as for lifelong learning. ApL courses complement 24 NSS subjects, diversifying the senior secondary curriculum.
Co-construction	Different from the direct instruction and construction approaches to learning and teaching, the co-construction approach emphasises the class as a community of learners who contribute collectively to the creation of knowledge and the building of criteria for judging such knowledge.
Core subjects	Subjects recommended for all students to take at senior secondary level: Chinese Language, English Language, Mathematics and Liberal Studies.
Curriculum and Assessment (C&A) Guide	A guide prepared by the CDC-HKEAA Committee. It embraces curriculum aims / objectives / contents and learning outcomes, and assessment guidelines.
Curriculum interface	Curriculum interface refers to the interface between the different key stages/educational stages of the school curriculum (including individual subjects), e.g. the interface between Kindergarten and Primary; Primary and Secondary; and Junior Secondary and Senior Secondary. The Hong Kong school curriculum, made up of eight key learning areas (under which specific subjects are categorised), provides a coherent learning framework to enhance students' capabilities for whole-person development through engaging them in the five essential learning experiences and helping them develop the nine generic skills as well as positive values and attitudes. Thus when students move on to senior secondary education, they will already have developed the basic knowledge and skills that the study of various subjects requires. When designing the learning and teaching content and strategies, teachers should build on the knowledge and learning experiences students have gained in the previous key stages.

<u>Term</u>	<u>Description</u>
Elective subjects	A total of 20 subjects in the proposed new system from which students may choose according to their interests, abilities and aptitudes.
Generic skills	Generic skills are skills, abilities and attributes which are fundamental in helping students to acquire, construct and apply knowledge. They are developed through the learning and teaching that take place in different subjects or key learning areas, and are transferable to different learning situations. Nine types of generic skills are identified in the Hong Kong school curriculum, i.e. collaboration skills, communication skills, creativity, critical thinking skills, information technology skills, numeracy skills, problem solving skills, self-management skills and study skills.
Hong Kong Diploma of Secondary Education (HKDSE)	The qualification to be awarded to students after completing the three-year senior secondary curriculum and taking the public assessment.
Internal assessment	This refers to the assessment activities that are conducted regularly in school to assess students' performance in learning. Internal assessment is an inseparable part of the learning and teaching process, and it aims to make learning more effective. With the information that internal assessment provides, teachers will be able to understand students' progress in learning, provide them with appropriate feedback and make any adjustments to the learning objectives and teaching strategies they deem necessary.
Key Learning Area (KLA)	Organisation of the school curriculum structured around fundamental concepts of major knowledge domains. It aims at providing a broad, balanced and coherent curriculum for all students in the essential learning experiences. The Hong Kong curriculum has eight KLAs, namely, Chinese Language Education, English Language Education, Mathematics Education, Personal, Social and Humanities Education, Science Education, Technology Education, Arts Education and Physical Education.
Knowledge construction	This refers to the process of learning in which learners are involved not only in acquiring new knowledge, but also in actively relating it to their prior knowledge and experience so as to create and form their own knowledge.

<u>Term</u>	<u>Description</u>
Learner diversity	Students are individuals with varied family, social, economic and cultural backgrounds and learning experience. They have different talents, personalities, intelligence and interests. Their learning abilities, interests and styles are, therefore, diverse.
Learning community	A learning community refers to a group of people who have shared values and goals, and who work closely together to generate knowledge and create new ways of learning through active participation, collaboration and reflection. Such a learning community may involve not only students and teachers, but also parents and other parties in the community.
Learning differences	This refers to the gaps in learning that exist in the learning process. Catering for learning differences does not mean rigidly reducing the distance between the learners in terms of progress and development but making full use of their different talents as invaluable resources to facilitate learning and teaching. To cater to learners' varied needs and abilities, it is important that flexibility be built into the learning and teaching process to help them recognise their unique talents and to provide ample opportunities to encourage them to fulfil their potential and strive for achievement.
Learning outcomes	Learning outcomes refer to what learners should be able to do by the end of a particular stage of learning. Learning outcomes are developed based on the learning targets and objectives of the curriculum for the purpose of evaluating learning effectiveness. Learning outcomes also describe the levels of performance that learners should attain after completing a particular key stage of learning and serve as a tool for promoting learning and teaching.
Level descriptors	A set of written descriptions that describe what the typical candidates performing a certain level is able to do in public assessments.
Other learning experiences	For whole person development of students, 'Other Learning Experiences' (OLE) is one of the three components that complement the examination subjects and Applied Learning (formerly named as Career-oriented Studies) under the Senior Secondary Curriculum. It includes Moral and Civic Education, Aesthetics Development, Physical Development, Community Service and Career-related Experiences.
Public assessment	The associated assessment and examination system for the Hong Kong Diploma of Secondary Education.

<u>Term</u>	<u>Description</u>
SBA Moderation Mechanism	The mechanism adopted by HKEAA to adjust SBA marks submitted by schools to iron out possible differences across schools in marking standards and without affecting the rank order determined by the school.
School-based assessment (SBA)	Assessments administered in schools as part of the teaching and learning process, with students being assessed by their subject teachers. Marks awarded will count towards students' public assessment results.
School-based curriculum	Schools and teachers are encouraged to adapt the central curriculum to develop their school-based curriculum to help their students achieve the subject targets and overall aims of education. Measures may include readjusting the learning targets, varying the organisation of contents, adding optional studies and adapting learning, teaching and assessment strategies. A school-based curriculum, hence, is the outcome of a balance between official recommendations and the autonomy of the schools and teachers.
Standards-referenced Reporting	Candidates' performance in public assessment is reported in terms of levels of performance matched against a set of standards.
Student learning profile	It is to provide supplementary information on the secondary school leavers' participation and specialties during senior secondary years, in addition to their academic performance as reported in the Hong Kong Diploma of Secondary Education, including the assessment results for Applied Learning courses, thus giving a fuller picture of the student's whole person development.
Values & attitudes	Values constitute the foundation of the attitudes and beliefs that influence one's behaviour and way of life. They help form principles underlying human conduct and critical judgment, and are qualities that learners should develop. Some examples of values are rights and responsibilities, commitment, honesty and national identity. Closely associated with values are attitudes. The latter supports motivation and cognitive functioning, and affects one's way of reacting to events or situations. Since both values and attitudes significantly affect the way a student learns, they form an important part of the school curriculum.

References

Reference for Teachers

Journal Articles

- Black, P., & Wiliam, D. (1998a). Assessment and classroom learning. *Assessment in Education*, 5(1), 7-74.
- Black, P., & Wiliam, D. (1998b). Inside the black box: Raising Standards Through Classroom Assessment. *Phi Delta Kappan*, October, 139-148.
- Brewer, S. M., & Jozefowicz, J. J. (2006). Making economic principles personal: Student Journals and Reflection Papers. *Journal of Economic Education*, Spring, 37(2), 202-216.
- Buckles, S., & Siegfried, J. J. (2006). Using multiple-choice questions to evaluate in-depth learning of economics. *Journal of Economic Education*, Winter, 37(1), 48-57.
- Chen, E. K. Y., & Lin, P. (2002). Competition policy under laissez-faireism: Market Power and its Treatment in Hong Kong. *Review of Industrial Organization*, 21, 145-166.
- Colander, D. (2003). The art of teaching economics. *Middlebury College Economics Discussion Paper No.03-10*. (Retrieved June 20, 2006, from <http://www.middlebury.edu/services/econ/repec/mdl/ancoec/0310.pdf>)
- Crowe, D., & Youga, J. (1986). Using writing as a tool for learning economics. *Journal of Economic Education*, Summer, 17(3), 218-222.
- Hadsell, L. (2005). Exploring values in the classroom: Three Exercises for Introductory Economics. *American Economics*, Fall, 49(2), 51-59.
- Holt, C. A. (1999). Teaching economics with classroom experiments. *Southern Economic Journal*, January, 65(3), 603-610.
- Kourilsky, M. (1987). Children's learning of economics: The Imperative and the Hurdles. *Theory into Practice*, 26(3), 198-205.
- Kourilsky, M. (1993). Economic education and a generative model of misleading and recovery. *Journal of Economic Education*, Winter, 24(1), 23-33.
- Northrop, E. (2000). Normative foundations of introductory economics. *American Economist*, Spring, 44(1), 53-61.

- Shulman, L.S. (1987). Knowledge and Teaching: Foundation of the New Reform. *Harvard Educational Review*, 57(1), 1-22.
- Spencer, R. W., & van Eynde, D. F. (1986). Experiential learning in economics. *Journal of Economic Education*, Fall, 17(4), 289-294.
- Stiggins, R. (2004). New assessment beliefs for a new school mission. *Phi Delta Kappan*, 86(1), 22-27.
- The oiloholics. (2005, August/September). *The Economist*, 11.
- VanSickle, R. L. (1992). Learning to reason with economics. *Journal of Economic Education*, Winter, 23(1), 56-64.
- Wentland, D. (2004). A guide for determining which teaching methodology to utilise in economic education: Trying to Improve How Economic Information is Communicated to Students. *Education*, Summer, 124(4), 640-648.

Books

- Assessment and Qualifications Alliance. (2004). *GCSE Economics 2006 Specifications*. Retrieved June 20, 2006, from <http://www.aqa.org.uk/qual/pdf/AQA-3144-W-SP-06.PDF>
- Assessment and Qualifications Alliance. (2004). *GCE AS/A Economics 2006 Specifications*. Retrieved June 20, 2006, from <http://www.aqa.org.uk/qual/pdf/AQA-5141-6141-W-SP-06.PDF>
- Assessment Reform Group. (1999). *Assessment for learning: Beyond the black box*. Cambridge: University of Cambridge School of Education.
- Biggs, J., & Watkins, D. (Eds.) (2001). *Teaching the Chinese learner: Psychological and pedagogical perspectives*. Hong Kong: Comparative Education Research Center.
- Black, P., & Wiliam, D. (1998). *Inside the black box: Raising standards through classroom assessment*. London: School of Education, King's College.
- Blenkin, G. M., Edwards, G., & Kelly, A.V. (1992). *Change and the curriculum*. London: Paul Chapman Publishing Ltd.
- Board of Studies. (1999). *Economics (Stage 6 Syllabus)*. NSW: Board of Studies. Retrieved June 20, 2006, from http://www.boardofstudies.nsw.edu.au/syllabus_hsc/economics_sup.html

- Boekaerts, M. (2002). *Motivation to learn*. Retrieved March 8, 2006, from <http://www.ibe.unesco.org/publications/EducationalPracticesSeriesPdf/prac10e.pdf>
- Brophy, J. *Teaching*. Retrieved March 8, 2006, from <http://www.ibe.unesco.org/publications/EducationalPracticesSeriesPdf/prac01e.pdf>
- Buckles, S., & Melican, C. (2002). *Assessment Framework: 2006 National Assessment of Educational Progress in Economics*. Washington: National Assessment Governing Board. Retrieved June 20, 2006, from http://www.nagb.org/pubs/econ_fw_06.pdf
- Cambridge International Examinations. (2004). *Economics (IGCSE Syllabus Code: 0455, for 2006)*. Retrieved June 20, 2006, from http://www.cie.org.uk/CIE/WebSite/UCLESData/Documents/IGCSE/Syllabus%202006/0455_y06_sy.pdf
- Chambliss, R., & Fresen, S. (Eds.). (2000). *Economics. Teacher's Guide (and Student Guide). Parallel Alternative Strategies for Students (PASS)*. Florida: Florida State Department of Education. Retrieved June 20, 2006, from http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/0d/ce/14.pdf
- College Entrance Examination Board, US. (2006). *Course Description for AP Economics*. Retrieved June 20, 2006, from http://www.collegeboard.com/prod_downloads/ap/students/economics/ap-econ-0607.pdf
- Curriculum Development Council. (2001). *Learning to learn: The way forward in curriculum development*. Hong Kong: Curriculum Development Council.
- Curriculum Development Council. (2002). *Basic education curriculum guide - Building on strengths (primary 1 - primary 3)*. Hong Kong: Curriculum Development Council.
- Curriculum Development Council. (2002). *Personal, social and humanities education key learning area curriculum guide (primary 1 - secondary 3)*. Hong Kong: Curriculum Development Council.
- DeRooy, J. (1995). *Economic Literacy: What Everyone Needs to Know about Money and Markets*. New York: Crown Publishing Group.
- Donovan, M. S., Bransford, J. D., & Pellegrino, J. W. (Eds.) (1999). *How people learn*. Retrieved March 8, 2006, from <http://books.nap.edu/html/howpeople2/>
- Edexcel, UK. (2002). *AS/A GCE in Economics 2003/4*. Retrieved June 20, 2006, from <http://www.edexcel.org.uk/VirtualContent/25198.pdf>

- Education Commission. (2000). *Education blueprint for the 21st century: Learning for life, learning through life - Reform proposals for the education system in Hong Kong*. Hong Kong: Education Commission.
- Education Commission. (2003). *Review of the academic structure of senior secondary education*. Hong Kong: Education Commission.
- Education and Manpower Bureau. (2004). *Reforming the academic structure for senior secondary education and higher education - Actions for investing in the future*. Hong Kong: Education and Manpower Bureau.
- Education and Manpower Bureau. (2005). *The new academic structure for senior secondary education and higher education - Action plan for investing in the future of Hong Kong*. Hong Kong: Education and Manpower Bureau.
- Friedman, M. (1989). *Friedman in China*. Hong Kong: The Chinese University of Hong Kong,
- Gipps, C. (1998). *Beyond testing: Towards a theory of educational assessment*. London: The Falmer Press.
- Gwartney, J. D., Richard L. S., & Lee, D. R. (2005). *Common Sense Economics: What Everyone Should Know About Wealth and Prosperity*. New York: St. Martin's Press.
- Holt, C. A., & McDaniel, T. (1996). Experimental economics in the classroom. In William B. W., & Phillip S. (Eds.). (1998). *Teaching Undergraduate Economics: A Handbook for Instructors*. McGraw-Hill, 257-268
- International Baccalaureate Organisation. (2003). *Economics (For first examinations in 2005)*. Geneva:Organisation du Baccalaureate International.
- Levitt, S. D., & Dubner, S. J. (2005). *Freakonomics: A Rogue Economist Explores the Hidden Side of Everything*. New York: HarperCollins Publishers Inc.
- Mankiw, N. G. (2004a). *Principles of Macroeconomics*, 3rd ed., Ohio: South-Western College Publishing.
- Mankiw, N. G. (2004b). *Principles of Microeconomics*, 3rd ed., Ohio: South-Western College Publishing.
- Marton, F., & Booth, S. (1997). *Learning and awareness*. New Jersey: Lawrence Erlbaum Associates, Publishers.
- National Council on Economics Education, US. *Voluntary National Content Standards in Economics*. Retrieved June 20, 2006, from <http://www.ncee.net/ea/standards/standards.pdf>

- National Research Council. (2000). *How people learn: Brain, mind, experience and school*. Washington, D.C.: National Academy Press.
- Parkin, M. (2003a) *Macroeconomics*, 6th ed., Mass.: Addison Wesley.
- Parkin, M. (2003b) *Microeconomics*, 6th ed., Mass.: Addison Wesley.
- Schug, M. C. (1985). *Economics in the school curriculum, K-12*. Washington: National Educational Association of the United States.
- Vosniadou, S. (2001). *How children learn*. Retrieved March 8, 2006, from <http://www.ibe.unesco.org/publications/EducationalPracticesSeriesPdf/prac07e.pdf>
- Walberg, H. J., & Paik, S. J. (2000). *Effective education practices*. Retrieved March 8, 2006, from <http://www.ibe.unesco.org/publications/EducationalPracticesSeriesPdf/prac03e.pdf>
- Watkins, C. (2005). *Classrooms as learning communities: What's in it for schools?* New York: Routledge.
- Welsh Joint Education Committee, UK. (2003). *GCE AS/A Economics 2005/6*.
- Whitehead, D. J. (1979). *Handbook for economics teachers*. London: Heinemann Educational Books.
- Levitt, S. D., Dubner, S. J. 著，李明譯（2006）《蘋果橘子經濟學》，台北：大塊文化出版股份有限公司。
- 列維特、都伯納等著，劉祥亞譯（2006）《魔鬼經濟學（揭示隱藏在表像之下的真實世界）》，廣東：廣東經濟出版社。
- 佛利民著，鄧文正譯（1989）《佛利民在中國》，香港，香港中文大學出版社。
- 教育統籌局（2004）《改革高中及高等教育學制——對未來的投資》，香港：教育統籌局。
- 教育統籌局（2005）《高中及高等教育新學制——投資香港未來的行動方案》，香港：教育統籌局。
- 教育統籌委員會（2000）《終身學習 • 全人發展——香港教育制度改革建議》，香港：教育統籌委員會。
- 課程發展議會（2001）《學會學習——終身學習 全人發展》，香港：課程發展議會。
- 課程發展議會（2002）《個人、社會與人文教育學習領域課程指引（小一至中三）》，香港：課程發展議會。
- 課程發展議會（2002）《基礎教育課程指引——各盡所能 • 發揮所長（小一至中三）》，香港：課程發展議會。

Websites:

The Becker-Posner Blog

<http://www.becker-posner-blog.com>

Biz/ed

<http://www.bized.ac.uk/>

Census and Statistics Department, HKSAR

<http://www.censtatd.gov.hk/>

Charles Holt's Teaching Interests: Games

<http://www.people.virginia.edu/~cah2k/teaching.html>

Classroom Experiments

<http://www.marietta.edu/~delemeeg/expnom.html>

EconExperiments

<http://iface.econ.cuhk.edu.hk/>

Economic Education Web

<http://ecedweb.unomaha.edu/home.htm>

Economics Roundtable

<http://www.rtable.net/index/rt/economics/recent>

Foundations for Teaching Economics

<http://www.fte.org>

Games Economists Play: Non-Computerized Classroom-Games for College Economics

<http://www.marietta.edu/~delemeeg/games/>

Greg Mankiw's Blog

<http://gregmankiw.blogspot.com>

Hong Kong Monetary Authority

<http://www.info.gov.hk/hkma/>

International Review of Economics Education

<http://www.economicsnetwork.ac.uk/iree/>

Institute of Economics, The Chinese University of Hong Kong: Commentaries

<http://institute.econ.cuhk.edu.hk/comment.php>

Journal of Economic Education

<http://www.indiana.edu/~econed/>

National Council on Economic Education

<http://www.ncee.net>

Books for the Enrichment of Students

Jevons, M. (1986), *Fatal Equilibrium*. Fawcett.

Jevons, M. (1993), *Murder at the Margin*. Princeton University Press.

Jevons, M. (1998), *Deadly Indifference*. Princeton University Press.

Roberts, R. D. (2002). *The Invisible Heart: An Economic Romance*. The MIT Press.

小鹽隆士著，李湘平譯（2004）《16歲開始的經濟學》，台北：先覺出版股份有限公司。

西村和雄著，白雪潔譯（2001）《漫畫入門〈經濟學〉》，台北：大地出版社。

柳泰憲（2005）《在小吃店遇見凱因斯》，台北：財經傳訊出版社。

傑達斯著，葛窈君譯（2006）《致命的均衡：哈佛經濟學家推理系列》，台北，經濟新潮社。

傑達斯著，江麗美譯（2006）《邊際謀殺：哈佛經濟學家推理系列》，台北，經濟新潮社。

羅伯茲著，李靈芝譯（2002）《愛上經濟：一個談經濟學的爱情故事》，台北，經濟新潮社。

Membership of the CDC-HKEAA Committee on Economics (Senior Secondary)

(From November 2003)

Chairperson:	Mr PANG Ying-yeung	
Members:	Mr CHAN Kwan-nga	(from March 2005)
	Ms CHAN Oi-ching	
	Mr CHAN Wing-keung	
	Mrs CHAN YIP Ah-may, Amy	(until September 2005)
	Dr CHIU Chi-shing	(from May 2004)
	Dr LAM Kit-chun	
	Mr LO Shiu-ming, Tommy	
	Professor LUI Ting-ming, Francis	
	Mr NG Kei-ling	(until January 2005)
	Dr PANG Ming-fai	(until December 2004)
	Dr WONG Kam-chau	
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Ex-officio Members:	Mr LEE Ming-kin, Simon (EMB)	(from July 2006)
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Secretary:	Mr LEE Ming-kin, Simon (EMB)	(from May 2006)
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