SYLLABUSES
FOR
SECONDARY SCHOOLS

ECONOMICS

(ADVANCED SUPPLEMENTARY LEVEL)

PREPARED BY
THE CURRICULUM DEVELOPMENT COUNCIL
RECOMMENDED FOR USE IN SCHOOLS BY
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CONTENTS

PREAMBLE

This syllabus is one of a series prepared for use in secondary schools by the Curriculum Development Council, Hong Kong. The Curriculum Development Council, together with its co-ordinating committees and subject committees, is widely representative of the local educational community, membership including heads of schools and practising teachers from government and non-government schools, lecturers from tertiary institutions, officers of the Hong Kong Examinations Authority as well as those of the Curriculum Development Institute, the Advisory Inspectorate and other divisions of the Education Department. The membership of the Council also includes parents and employers.

All syllabuses prepared by the Curriculum Development Council for the sixth form will lead to appropriate papers of the Hong Kong Advanced Level Examination.

This syllabus is recommended for use in Secondary 6 and 7 by the Education Department. Once the syllabus has been implemented, progress will be monitored by the Advisory Inspectorate and the Curriculum Development Institute of the Education Department. This will enable the Economics Subject Committee (Sixth Form) of the Curriculum Development Council to review the syllabus from time to time in the light of classroom experiences.

All comments and suggestions on the syllabus may be sent to:

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1. INTRODUCTION

This syllabus on Advance Level Economics was written in accordance with the introduction of AS Level courses and examinations recommended by the Education Commission in its Report No.2 (para. VI. 9) and elaborated in the Education Commission No. 3 (para. 2.12).

This syllabus is a continuation of the Economics curriculum at the Certificate Level and is a constituent part of the Economics curriculum at the Advanced Level. Its content is identical with that of Part I of the Advanced Level. As a sixth form subject curriculum, it has its inherent coherence of structure and is of an appropriate level of intellectual demands.

The chapter on "Curriculum Guide" includes specific objectives and suggested activities on different topics. It is hoped that these suggestions could help teachers to make Economics a meaningful, relevant and interesting subject. The chapter on "Teaching Approaches and Teaching Strategies" provides teachers with some ideas on different teaching approaches which may be helpful when teachers are designing relevant teaching activities. There are also some illustrated examples on selected topics for teachers to put into practice.

'Titles of useful references and audio-visual aids are included in the Syllabus of Economics (Advanced Level) (1992) prepared by the Curriculum Development Council; the "Economics: A Resource Catalogue" (1995) published by the Economics/EPA/GPA Section of the Advisory Inspectorate of Education Department; and its website (http://members.hknet.com/~eprsect/eng/index.html). To get the updated references, teachers must, however, keep themselves informed of new and recent developments in the teaching of Economics.'

2. AIMS AND OBJECTIVES

The aims of this course are:

1. to provide students of varying aptitudes with the basic economic knowledge and skills necessary to understand better the world in which they live;
2. to develop students' analytical and critical understanding of the more importance economic forces and institutions with which they will come into contact as producers and consumers, and of the interdependence of economic activities;
3. to develop in students an awareness of some major issues of economic policy in the local and international economy;
4. to develop in students the ability to communicate through the effective use of economic terminology and data.

More specifically, students are expected to be able to demonstrate the following abilities by the end of the course:

1. to recall the basic terminology of economics, essential facts relating to economics and economic institutions;
2. to recognize the merits and limitations of economic theories;
3. to understand and interpret economic information presented in verbal, numerical and/or diagrammatic forms using the basic concepts and analysis of Economics; as well as to translate such information from one form to another.
4. to apply appropriate economic concepts and analysis to economic problems and issues.
5. to distinguish facts from values, make reasoned decisions and to detect a fallacious argument;
6. to organize and present economic ideas and statements in an accurate and logical way.

3. SYLLABUS OUTLINE

Topic	Suggested no. of periods
1. The scope of economic analysis	19
2. The law of demand and the theorem of exchange	48
3. Cost and supply	60
4. Government and economic organizations	26
5. The factor market	30
6. The problem of social cost	31
Total	**214**

4. CURRICULUM GUIDE

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
1. The scope of economic analysis	(i) Scarcity and the meaning of competition (5 periods)	At the end of the lessons, students should be able: (i) to explain the inter-relationship among scarcity, competition and discrimination,	Class Activities: Given hypothetical cases with scarcity problems of various sorts, students are asked to suggest the possible criteria of competition and the effects of discrimination in each case.
		(ii) to distinguish free goods from scarce goods,	Class Activities: Ask students to make a list of free goods and scarce goods. Discuss with students the problems of their classification.
		(iii) to illustrate the concepts of scarcity, choice, opportunity cost and efficiency with a production possibility curve.	Data Response Exercise: Let students try a data response exercise on the production possibility curve. Highlight the concepts of opportunity cost, choice, efficiency with the students.
	(ii) Economics as an empirical science: basic postulates and methodology (8 periods)	At the end of the lessons, students should be able: (i) to understand the meaning and importance of the basic postulates and the testing of hypotheses,	

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(ii) to distinguish positive statements from normative statements,	Class Activities: Collect newspaper cuttings on some economic issues. Ask students to identify the normative statements / judgment involved in the issues.
		(iii) to explain the attributes of a useful economic theory,	
		(iv) to understand the logical nature of a testable (refutable) hypothesis.	Class Activities: Give students various examples on the fallacy of affirming the consequence and the fallacy of denying the antecedents. Discuss with students the logical fallacy in each example. To sum up, ask students to offer their own examples on the errors in logical reasoning. Class Discussion: Ask students to give examples of tautological statements.
	(iii) The meaning of utility, wealth, and income, and the postulate of maximization (6 periods)	At the end of the lessons, students should be able: (i) to explain the meaning of utility, wealth and income, (NB: wealth and income may be discussed in detail under topic 5)	

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(ii) to understand the importance of the postulate of maximization in deriving testable (refutable) implications, (iii) to apply the postulate of constrained maximization, in the interpretation of economic behaviour, (iv) to understand that the utility maximization assumption can be tautological without specification of constraints.	Class Discussion: Use cases like suicide or drug trafficking as examples, discuss with students, in the light of the utility maximization axiom, the meaning of tautological statements. Explain to students how the axiom can be made operationally useful.
2. The law of demand and the theorem of exchange	(i) The basic properties of indifference curves, and the money income constant demand curve (14 periods)	At the end of the lessons, students should be able: (i) to explain the basic properties of the indifference curves and their implications for consumer equilibrium under constraints, (ii) to decompose price effect into income effect and substitution effect, (iii) to distinguish normal goods, inferior goods and Giffen goods,	

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(iv) to derive the money income constant demand curve, (v) to distinguish between a demand curve and the law of demand, (vi) to apply the indifference curve analysis in explaining consumer behaviour.	Class Activities: Ask students to apply the indifference curve analysis in the following cases: (i) buffet dinner (ii) subsidy by kind versus subsidy by cash (iii) consumption of TV without NICAM device under: - an increase in income - an increase in the price of NICAM TV.
	(ii) The inverse relationship between price and quantity demanded (6 periods)	At the end of the lessons, students should be able: (i) to explain and apply the first law of demand, (ii) to understand the significance of ceteris paribus in economic analysis,	Class Activities: Give students cases with apparent upward sloping demand curves. Ask them to reconcile the law of demand with these apparent contradictions. Highlight the significance of ceteris paribus in each case.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(iii) to understand and apply the concepts of elasticity of demand.	
	(iii) Use value, exchange value, and the concept of consumer's surplus (14 periods)	At the end of the lessons, students should be able: (i) to define use value, exchange value and consumer's surplus, (ii) to resolve the paradox of value in terms of use value and exchange value, (iii) to derive a demand curve from a MUV curve,	Class Survey: Choose a commodity, for example, a popular singer' s poster with the singer' s signature, and ask students the maximum price per unit each of them would be willing to pay at different quantities of consumption. Give them a market price and ask for their quantities demanded or brought. Let the students calculate the actual payment, their maximum amount willing to pay and consumer' s surplus.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(iv) to apply the concepts of use value, exchange value and consumer's surplus in explaining consumer behaviour under different pricing arrangements.	Class Activities: Make use of the findings in the above class survey, ask students to give examples on how their consumer' s surplus can be extracted. Class Discussion: Use membership fee, and all-or-nothing pricing, as examples, discuss with students the means of extracting consumer' s surplus.
	(iv) Market demand, the equi-marginal principle, and the gains from exchange (10 periods)	At the end of the lessons, students should be able: (i) to derive market demand from individual demand, (ii) to explain the theorem of exchange, (iii) to state the equi-marginal principle and apply it in the case of exchange, (iv) to determine the gains from trade with/without production,	Class Activities: From the above class survey, select students with different MUV of the same commodity. Discuss with students how exchange would be mutually beneficial. Modify the case to allow for the presence of transaction costs.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(v) to define and identify transaction costs in given examples, (vi) to explain the role of middlemen in the presence of transaction costs in exchanges.	
	(v) The meaning of price as a criterion of allocation under competition (4 periods)	At the end of the lessons, students should be able: (i) to explain the role of price in allocating resources, (ii) to understand the difference between money price and full price of a commodity, (iii) to offer examples of non-price competition.	Class Discussion: Cite consumers queueing up for rugby tickets or any other commodities as an example, discuss with students the implication of non-price competition and the concept of full price.
3. Cost and supply	(i) The concepts of cost, economic rents and windfall profits (Quasi-rent NOT required)(14 periods)	At the end of the lessons, students should be able: (i) to apply the concepts of opportunity cost in interpreting economic behaviour, (ii) to explain the meaning of economic rent and windfall profits.	Class Activities: Collect newspaper cuttings with concepts of cost and profits. After teaching the relevant topics, ask students to point out whether there are any misconceptions of cost and profits in the newspaper cuttings.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(iii) to understand economic rent is part of cost,	Class Discussion: Use the wage payments of popular movie stars / singers as examples, discuss with students the nature of these wage payments. Apply the concepts of economic rent and cost in discussion.
		(iv) to explain the implication of windfall profits for predicting economic behaviour or resource allocation.	
	(ii) The law of diminishing marginal productivity (4 periods)	At the end of the lessons, students should be able:	
		(i) to derive marginal product and average product from total product,	Data Response Exercise: Provide students with hypothetical data of the output of a small firm in the short run.
		(ii) to define the law of diminishing marginal productivity.	Ask students to complete the production table and present MP, AP and TP graphically. Draw conclusion from this exercise.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
	(iii) Cost curves and supply curves (Isoquant analysis NOT required)(6 periods)	At the end of the lessons, students should be able: (i) to identify fixed cost and variable cost from given examples, (ii) to derive the short run cost curves, (iii) to derive the short run supply curve of a firm from its MC curve, (iv) to explain the shape of long run average cost curve in terms of economies and diseconomies of scale.	Class Activities: Continue with the previous exercise. Assign factor price to the inputs of the hypothetical firm. Derive the TFC, TVC and TC schedules. Help students to calculate the AC and MC in the above case. Show the technical relationship between the cost curves.
	(iv) Resource allocation under price taking (16 periods)	At the end of the lessons, students should be able: (i) to determine the wealth-maximizing equilibrium of a price taker in both short run and long run, (ii) to derive a price taker's short run supply curve and short run industry supply curve, (NB: long run supply curve NOT required)	Data Response Exercise: Data response exercise on the determination of the wealth-maximizing equilibrium of a price-taking firm.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(iii) to infer allocative efficiency implications from the equilibrium of a price-taking industry.	
	(v) Monopoly pricing (price searching), including perfect and partial (third degree) price discrimination (18 periods)	At the end of the lessons, students should be able: (i) to determine the wealth-maximizing equilibrium of a price searcher, (ii) to define monopoly rent, (iii) to evaluate the allocative efficiency implication of simple monopoly pricing, (iv) to specify the conditions and to identify cases of price discrimination, (v) to understand the effects of price discrimination on output and allocative efficiency.	Case Study: Case Study on peak-load pricing of MTR/KCR as an example of price discrimination. Class Discussion: Discuss with students cases like differential medical charges, discount fares for students, varying interest rates on loans etc. to determine whether or not price discrimination has been practiced in each case.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
	(vi) A simple description of oligopoly and monopolistic competition (2 periods)	At the end of the lessons, students should be able: (i) to identify price rigidity and inter-dependence as the key features of oligopoly, (ii) to specify product differentiation and non-price competition as the main features of monopolistic competition.	Class Discussion: Discuss with students the pricing tactics of petro-companies in Hong Kong in the light of the features of oligopoly. Class Survey: Ask students to conduct a survey on two to three products with varying degrees of product differentiation. Tell them to tabulate the prices for each product and the major product characteristics preferred by the students in the class. Discuss with students the importance of product differentiation in affecting the market power of a monopolistic competitive firm.
4. Government and economic organizations	(i) The nature of the firm: the organization of production with the presence of transaction costs (8 periods)	At the end of the lessons, students should be able: (i) to identify the possible costs of organizing production directly through the price mechanism, (ii) to account for the emergence of the firm in terms of contracts and saving the transaction costs of using the market,	

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(iii) to explain the merits and demerits of some common forms of contractual arrangements and the conditions of adopting them in given examples.	Class Discussion: Select a few kinds of productive activities, for example, the taxi service, and ask the students to suggest which form of contracts will be most efficient.
	(ii) Price controls and rent controls (6 periods) (iii) The implications of non-price allocation (6 periods)	At the end of the lessons, students should be able: (i) to analyse, with the aid of supply and demand diagrams, the possible effects of price and rent controls,	Class Discussion: Group discussion on the effects of rent control on landlords, existing and potential tenants. Ask students to discuss the problems created under rent control and the expected market solutions.
		(ii) to predict the possible behaviour arising from non-price allocation,	Class Discussion: Discuss with students the economic effects of selling private housing units on the first-come, first-served basic and by drawing lots.
		(iii) to explain the dissipation of rent and the question of inefficiency under non-price allocation.	
	(iv) The incidence and implications of some common taxes (6 periods)	At the end of the lessons, students should be able: (i) to identify direct, indirect, ad valorem, unit and lump sum taxes,	Project: Microeconomic effects of tax changes in the budget:

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(ii) to explain the meaning of tax incidence, (iii) to explain and illustrate the distribution of the incidence of tax between sellers and buyers under different demand and supply elasticities, (iv) to analyse the effects of a tax on wealth distribution and resource allocation.	(i) Ask students to find out the major tax changes in the recent budget. (ii) Follow up one of the tax changes by collecting relevant newspaper cuttings. (iii) Comment on the newspaper cuttings or illustrate the viewpoints of the newspaper cuttings with relevant economic concepts. Class Discussion: Discuss with students the effects of the imposition of a lump sum tax on the relative consumption of high quality and low quality wine.
5. The factor market	(i) The demand for and supply of factors (8 periods)	At the end of the lessons, students should be able: (i) to define MRP and VMP and to distinguish their differences, (ii) to understand why MRP curve below the maximum ARP is the factor demand curve of a firm under a competitive factor market, (iii) to explain the supply curve of a factor may be backward bending.	Data Response Exercise: Use hypothetical data of input, output and price to calculate the MRP and VMP.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
			Class Survey: Ask students to decide how many hours they are willing to work in a day at different hourly wage rates. Help them to construct their own individual labour supply curve.
	(ii) The determination of wages in price takers' markets (2 periods)	At the end of the lessons, students should be able to explain how wage is determined by supply of and demand for labour in a competitive factor market.	
	(iii) The determination of rents (6 periods)	At the end of the lessons, students should be able: (i) to define and to distinguish transfer earning from economic rent, (ii) to recognize rent may be earned by any factor, (iii) to understand the implication of rent on the supply of a factor.	Class Activities: Ask students to estimate the incomes of (i) A super star (ii) A doctor (iii) A taxi driver Discuss the transfer earning and economic rent of each of them.
	(iv) Present value and investment decisions (14 periods)	At the end of the lessons, students should be able: (i) to explain the generalized concept of capital, (ii) to understand why interest exist,	Class Discussion: Relate income stream generated by an asset (e.g. a housing unit, a slave, a taxi, an oil well, etc.) to the price of the asset. Discuss with students the relationship between income and capital.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(iii) to discount an income stream of a capital asset into its present value,	Data Response Exercise: Data response exercises on discounting.
		(iv) to explain how variation in discounting variables can affect the present value of an income stream,	Class Activities: Given income streams of three different occupations such as lawyer, singer and government clerk, ask students to choose their future occupations with regard to different interest rates.
		(v) to understand the relationship among present consumption, investment and future consumption,	Class Discussion: Use salted egg, dried oyster, old-vintage wine etc, as examples, discuss with students the meaning of investment. Ask students to offer their own examples as consolidation.
		(vi) to define MEC and explain the relationship of interest rate and investment decision,	Data Response Exercise: With data of future income stream and cost outlays of an investment project, ask students to make investment decision under certain market interest rates.
		(vii) to account for the relationship among wealth, income, and interest.	
6. The problem of social cost	(i) The meaning of economic efficiency and the Pareto condition (10 periods)	At the end of the lessons, students should be able: (i) to define the Pareto condition,	Class Activities:

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(ii) to understand the requirements of marginal equalities in attaining Pareto optimality,	Ask students to evaluate the efficiency of the equilibrium state of some models which they have learnt before. e.g. One-good two-person exchange model. Production under price-taking firms. Monopoly with simple pricing. Monopoly with perfect price discrimination. Ask students to state the efficiency condition for the allocation in each case.
		(iii) to define the characteristics of a public good, (iv) to explain the problems in the pricing and production of public goods,	Class Activities: Ask students to offer examples of public goods. Discuss with them any controversy in their examples. Class Survey and Discussion: Find out the MUV for radio broadcast of a few students. Help them to generate the 'market demand curve' for radio broadcast Discuss with them the characteristics of radio broadcast and the difficulties of MC pricing in this case. Ask students to suggest possible pricing arrangements to overcome the problems so that production can be retained by a private firm.

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
		(v) to evaluate the efficiency of certain resource allocative behaviour under the presence of transaction costs.	Class Discussion: With the existence of transaction costs, discuss with students the efficiency conditions of the following cases: (i) buffet dinner consumption equilibrium. (ii) equilibrium of exchange with / without middleman. Show that Pareto optimality still holds in each case even without marginal equality.
	(ii) Property rights and the divergence between private and social cost (21 periods)	At the end of the lessons, students should be able: (i) to define and distinguish between private cost (benefit) and social cost (benefit), (ii) to explain, how the divergence between private cost and social cost affects allocation of resources, (iii) to identify the forms and problems of government intervention for correcting externalities, (iv) to explain the private property rights and their importance to market exchange, (v) to explain and apply the Coase Theorem in interpreting economic behaviour,	Class Activities: Ask students to collect newspaper cuttings showing the existence of externalities. Ask them to explain why they think externalities exist in each case. Case Study: Ask students to choose one example of externalities such as effects of smoking, use of leaded petroleum etc. for case study. Class Activities Ask students to analyse the rights of a person on the flat he lives if the flat is (i) bought from a private property developer

Syllabus Content	Guidance Notes	Specific Objectives	Suggested Activities
			(ii) bought under the home ownership scheme (iii) leased from the Hong Kong Housing Authority. Class Activities: Given the information of private and social costs (benefits) of a production process, ask students to work out the optimal level of output under different assignments of property rights. Ask them how the results will be affected if transaction costs exist.
		(vi) to evaluate the productive efficiency of a common property resource, (vii) to assess the efficiency of productive activities giving rise to externalities, under the existence of transaction costs.	Class Discussion: Use a common property resource (e.g. ocean fish) to illustrate the dissipation of rent. Discuss how the presence of transaction costs would / would not affect the efficiency of production in the above example.

5. SUGGESTED TIME ALLOCATION

Four to five periods (40 minutes each) per week are recommended. The number of periods for the teaching, revision, activities and assessment of each topic is suggested as follows:

Topic		*No. of period*	
1	(i)	5	
	(ii)	8	
	(iii)	6	19
2	(i)	14	
	(ii)	6	
	(iii)	14	
	(iv)	10	
	(v)	4	48
3	(i)	14	
	(ii)	4	
	(iii)	6	
	(iv)	16	
	(v)	18	
	(vi)	2	60
4	(i)	8	
	(ii)	6	
	(iii)	6	
	(iv)	6	26
5	(i)	8	
	(ii)	2	
	(iii)	6	
	(iv)	14	30
6	(i)	10	
	(ii)	21	31
		Total	**214**

6. TEACHING APPROACHES AND TEACHING STRATEGIES

According to Keynes, Economics is a method rather than a doctrine. It is an apparatus of the mind and a technique of thinking. Hence, effective economics teaching demands not merely factual transmission of economic knowledge/vocabulary to students but also the inculcation in students the unique economic reasoning of the discipline as well as the ability to apply economic theories to analyse economic problems in their socio-economic surroundings. As shown in Chapter 2, the present CDC Advanced Level Syllabus also shares similar aspirations.

Yet, the above alleged aims of economics teaching are not easy to achieve. Firstly, Economics as an academic discipline is theoretical and abstract. Grasping economic reasoning requires students to think in abstraction. Hence, it is not surprising that most students regard sixth form Economics as difficult and unrelated to their daily life experience. Another problem arises from the contention of different schools of thought in the discipline. In addition, politicians and economists may also have different views on policy issues. Thus, a sixth form student may find it confusing to juggle with conflicting arguments posed by different parties.

Furthermore, the traditional teaching approach to economics may not be able to fully achieve the above aims of economics education. The traditional approach is usually a didactic one under which students are being told (by a lecture, a film or through reading) the specific economic knowledge. The teacher prepares all the teaching materials, presents the teaching points and structures the lessons in such a way that students can easily compile a complete set of notes for memorization. The communication flow is a unidirectional one from the teacher to the students. Actually, students are expected to be only passive learners. Such didactic approach which is very time efficient and systematic would certainly facilitates rote memorization. However, it is not too effective in encouraging critical and analytical thinking. Neither does it help to develop students' ability to apply economic concepts to daily life problems.

Hence, it is no surprise that overseas research findings indicate that educational experiences seem to bring about only very limited changes in the way of thinking about the economic environment. That means, teaching does not have a lasting effect on students' perception. Students who are quite successful in the examination hall may still retain layman's perception of their economic environment. Suchman's learning/thinking model[1] also points out that teachers can control the classroom but it is the students who ultimately control their own learning.

The aims of economics teaching can be achieved by adopting appropriate teaching approaches and strategies. Apart from the traditional didactic approach, two other approaches, namely the diagnostic approach and the inquiry approach, are found relevant for economics teaching at sixth form level in Hong Kong.

The diagnostic approach requires probing students' knowledge, attitudes, and skills to find out how much they know about certain concepts and skill to find out how much they know about certain concepts and skills. On the basis of this information, teachers can work towards expanding their understanding or skills or correcting misunderstandings. Teaching can then be designed in such a way to meet the needs of the students and to restructure students' knowledge.

For instance, diagnostic teaching can be used at the beginning of a teaching unit to elicit pupil response. Provocative questions such as "What is meant by inflation?", "What causes inflation in Hong Kong?", "What is cost?" or "Is there a labour shortage in Hong Kong?" can stimulate thoughts. Attitude or knowledge surveys, brainstorming or questioning may be adopted to find out how much students already know about certain concepts or topics. As layman's understanding of concepts such as inflation, cost, shortage, etc. may be very much different from economic understanding, the teacher can then take appropriate strategies to remedy misconceptions before proceeding with further materials.

Diagnostic teaching can also be used as an assessment device such as pre-test of a programmed learning unit to discover what the students already know.

In small group projects, problem solving sessions, or group discussions, the teacher can organize a debriefing session so that students can report the results of their work to the rest of the class, to clarify their ideas and to comment and question each other's work. Diagnosis and remediation can be achieved through teacher-guided discussion or students sharing of ideas.

The role of the teacher in diagnostic teaching is important. The teacher is both a diagnostician and learning director. By means of questioning, the teacher pushes students to expose the knowledge they already possess and examine how they themselves acquire knowledge. The teacher may then challenge students' concepts and knowledge by asking thought-provoking questions or providing counter-examples. The aim is to modify the way students perceive meaning from the world and also restructure the knowledge possessed by them.

Inquiry learning approach emphasizes active pupil participation in the thinking/learning process so as to learn through personal discovery or problem solving. Inquiry learning can be based on teacher-guided activities or it can be based on pupil initiated projects. The ultimate purpose of this approach is to develop an autonomous inquirer who has the motivation and ability to learn on his/her own.

Inquiry can be deductive or inductive.

Deduction is the process of drawing logical conclusions from a concept, generalization or theory. For example, the teacher may ask students to infer implications from theories and definitions or make predictions through logical reasoning based on concepts.

Inductive inquiry is the process of generalizing from given facts. The stages of (1) observation, (2) classification of observations, (3) forming hypotheses, (4) verification of hypotheses and (5) forming generalizations, are necessary.

In adopting the inquiry approach in classroom, teachers aim at achieving one or more of the following cognitive tasks:

(1) Helping students to form concepts out of given information.
(2) Interpreting data (finding out the similarities and differences, drawing conclusions or hypotheses).
(3) Applying principles in real/hypothetical situation.

To sum up, the didactic, diagnostic and inquiry approaches vary in the degree of teacher control and pupil participation, with the greatest teacher control in teaching/learning under the didactic approach and the highest degree of pupil participation under the inquiry approach. Obviously, the didactic approach is least conducive to developing analytical thinking required by the discipline. Yet, it is not without a merit. Such an approach is still commonly found in classrooms because it is time efficient. The teacher can cover a lot of teaching points in quite a short period of time. On the other hand, the inquiry approach, though found to be more desirable in developing the skills of economic reasoning, is time-consuming.

In fact, more than one approach can be used in teaching Advanced Level Economics. Topics of varying complexities may be treated differently at different times. A group of economic educators in USA also consider variety as a very important factor in determining the success of economics teaching. [(2)] They suggest that it necessary to intersperse theories with practice so that students can make meaning out of their own economic concepts and theories. Theories can be introduced by any of the three approaches and students are given the opportunities to practise using the theories on economic problems, for example, through survey, data response exercise, case study etc. Feedback and evaluation of students' progress is important as students can know their own achievement. Above all, the sense of achievement is a very strong motivator of learning especially if we want to develop students to be autonomous inquirers.

To complement the adoption of different approaches, a variety of activities or teaching strategies can be used in the classroom. These activities provide chances for students to work on their own, to apply their economic concepts, to develop a critical attitude and, above all, to increase the interest of the lessons. The following suggests some useful strategies/activities which can be adopted in classroom. Most of them have been incorporated in the curriculum guide. It has to be stressed that the strategies/activities listed below are not exhaustive. Teachers are free to adopt other strategies which are found useful to them.

Discussion

Discussion, similar to guided inquiry, is commonly used in sixth form teaching. It is especially useful in helping students to apply the theories to interpret the real world economic phenomena. The classroom discussion technique is based on the belief that knowledge resides within the students participating in discussion. Students can learn from the effect of relating new data to their current economic knowledge. The role of a teacher is not to impart knowledge but to stimulate the knowledge students already possess and create a situation that encourages students to find the relations among ideas. The teacher may help

the students to interpret their own experiences through appropriate questions and suggestions. Thus, the teacher has to ask careful questions which will lead students to the desired responses.

To make discussion effective, the teacher has to be very clear about the purpose of the discussion. Throughout the lesson, the teacher has to keep the discussion on target. Any irrelevant questions raised by students side-tracking the discussion should be ignored for the time being. The teacher has to encourage all students to participate actively in discussion. There must be even chance for students to express their ideas. Responses of students have to be audible and understandable. Furthermore, the teacher can ask probing questions following students' responses in order to stimulate the students to re-examine their ideas or to clarify any ambiguity of the responses. This will encourage students to think through their responses more thoroughly. Finally, a good discussion session must be concluded by either consolidating the parts of discussion into coherent whole or providing thought-provoking questions as a follow-up stimulant.

Brainstorming

Brainstorming is a technique which encourages students to react to a controversial question or problem by giving any idea that comes to mind in a very short period of time, say five to ten minutes. Criticism or evaluation of these reactions are not allowed in the stage of brainstorming. Brainstorming can be conducted for a large group, small groups or on individual basis.

Such technique can be used in two different situations. First, as an "opener" of a topic by eliciting responses from students. Teacher can then determine what students already know and what their attitudes are toward a topic. Second, brainstorming can be used for problem solving. For example, students can have a brainstorming to identify the causes of a particular problem (such as inflation) or the consequences of attempting a particular solution.

After the brainstorming session, the teacher or the students themselves can process the brainstormed ideas to make generalizations or identify concepts.

Projects

Students at sixth form level may also be required to conduct and report an inquiry on a topic or an economic issue.

There are two main ways to carry out project inquiry by students. One way is to divide the class into several groups and each group is designated to collect information about one particular aspect of a chosen topic. After a certain period of time and information has been collected, each group works to sort out and collate what has been discovered with the help of the teacher. Then the teacher may help to bring together all the information collected by organizing a reporting session for students to explain their findings to the class or arranging board display, class display, etc. Hence, different groups can look at each other's work. This method is more suitable for projects of a large scale.

Another way of conducting project is to ask students, either in groups or on individual basis, to present the findings in the form of a survey report.

All in all, the ideas of doing projects is educational as students learn skills such as collection of data, asking appropriate inquiring questions, developing analytical mind and presentation skills. However, the prerequisite of success requires the topic chosen to be manageable and the survey/inquiry to be guided by the teacher. If possible, students can first formulate economic hypothesis to be tested by the project before proceeding to collection of data so that they have a clear focus of what is to be found from the inquiry.

Problem Solving Exercises

The aim of problem solving exercises is to give students an insight into the nature of decision-making under different circumstances. In addition, they provide students with the chance to apply their economic knowledge in hypothetical situations.

Teachers can provide students with hypothetical problems which they have to solve by manipulating certain data. These exercises involve anticipating and evaluating the likely outcomes of various courses of action.

The problems to be tackled can be built on real situations within the experience of the students, for example, a problem solving built upon a visit to a factory. Besides, teachers can create hypothetical situations with the help of statistical data, pictures, graphs, recordings, case studies, etc.

Successful problem solving depends on the choice of topics and proper structuring of suitable resource materials for use by the teacher so that relevant economic principles can be learned inductively through the study of the resource materials.

Unlike students at tertiary level who are expected to work on their own, more guidance and participation by the teacher is required at sixth form.

Tutorial

If the class size is small or the time allocation is adequate, small group tutorial work is a highly desirable alternative to classroom teaching.

Tutorial has an important characteristic. Work is prepared by the students for discussion with the teacher. Tutorial can be subject-centred or learner-centred. It provides a good opportunity for active learner participation. Teacher can discuss with students any problems arising from what has been taught or they have come across in reading. Teacher can also ask students to prepare small scale survey of a topic of interest or clarify key concepts in the form of worksheet/case study, etc. Brainstorming, problems solving exercises and other strategies may also be used in tutorial.

The effective utilization of tutorial sessions requires careful teacher planning to choose a suitable theme for discussion or pupil presentation. Active participation has to be encouraged and students should be given sufficient time for preparation.

Through tutorial work, students can improve their expression, learn to asses others' viewpoints critically and be able to frame pertinent questions. Tutorial work enables the students to develop a surer and deeper understanding of the economic concepts with active participation in the learning process.

Concluding Remarks

In conclusion, there is no simple panacea of effective economics teaching at sixth form level. Experience of economics educators reveals that greater effectiveness of teaching is closely related with careful teacher planning before the lessons. Active teacher diagnosis of the subject requirement and students' ability and interest seem to be the prerequisites to improving the quality of teaching. With such understanding, the teacher can then select a variety of teaching approaches and strategies at different times subject to constraints like the requirements of the topics, teaching time and resources available.

Furthermore, the teacher has to review the successfulness of his/her teaching from time to time by evaluating students' progress and achievement. Such review provides feedback on the suitability of the teaching approaches and strategies adopted. Whenever necessary, the teacher can modify his/her way of teaching. In short, the teacher is the director of learning but he/she is also the learner within the classroom.

Note :

(1) According to Suchman's learning/thinking model, students are not passive recipient of knowledge. Instead, when the learner gets in contact with some new experiences, the learner's state of mind will determine how and which of the new experiences will be perceived and retained. The learner's own theories of thinking, framework of the world as well as motivation form one's state of mind.

(2) Suzanne W. Helburn and James E. Davis, *Preparing to Teach Economics : Approaches and Resources,* Social Science Education Consortium, Inc., 1982.

7. SUGGESTIONS ON TEACHING SELECTED TOPICS

This Chapter consists of a few suggestions on how selected topics in the syllabus can be taught. These suggestions illustrate how a variety of teaching activities/resources such as brainstorming, discussion, problem solving exercises, case study, survey, cartoon illustrations and concept map can be used in an integrated manner to achieve specific objectives. These suggestions only serve as examples of implementing the "Teaching Approaches and Teaching Strategies" rather than ' model lesson plans' for teachers to follow.

Suggestion 1

Topic: Cost and economic rent

Teaching Materials

Extracts from newspaper cuttings and a hypothetical case

Objectives:

At the end of the lessons, students should be able to:

(1) define cost as the highest valued option forgone.

(2) distinguish explicit cost from the full cost of an action.

(3) distinguish sunk/historical cost from opportunity cost.

(4) understand that sunk cost has no effect on choice of options.

(5) define economic rent.

(6) understand economic rent is part of cost.

Suggested Teaching Approach:

Motivation

To motivate discussion, students are shown the cartoon picture in resource material 1.1 (RM 1.1).

Brainstorming

Students are asked to suggest reasons for the 'richness' of the taxi-licence holder.

Guided discussion on a hypothetical case

Teacher then turns students' attention to a hypothetical case: part A of the story of Ah Kwai. (RM 1.2 to 1.3)

Teacher then asks students to consider the following questions:

-- How much did Ah Kwai pay for his taxi licence?

-- What was the explicit cost of acquiring the taxi licence by Ah Kwai?

-- Was it the opportunity cost of owning the taxi licence by Ah Kwai in 1982? Why or Why not?

With additional information in part B, let students discuss whether Ah Kwai should or should not continue his ownership of the taxi-licence.

Concepts development

Then the teacher introduces the concept of sunk cost to the students.

The teacher analyses Ah Kwai's possible decisions in terms of opportunity cost.

The teacher concludes that sunk cost is historical cost and should not affect a current economic decision. His decision would not change unless the value of his best forgone alternative of owning a taxi licence had changed.

Guided discussion

With information in part C (RM 1.2), discuss with students whether or not Ah Kwai would have made enormous 'profit' by selling the licence.

Concepts development

The teacher introduces the concept of economic rent.

The teacher asks students to explain Ah Kwai's decision in terms of opportunity cost.

The teacher explains to students that Ah Kwai's possible gain is economic rent which is a cost, not profit.

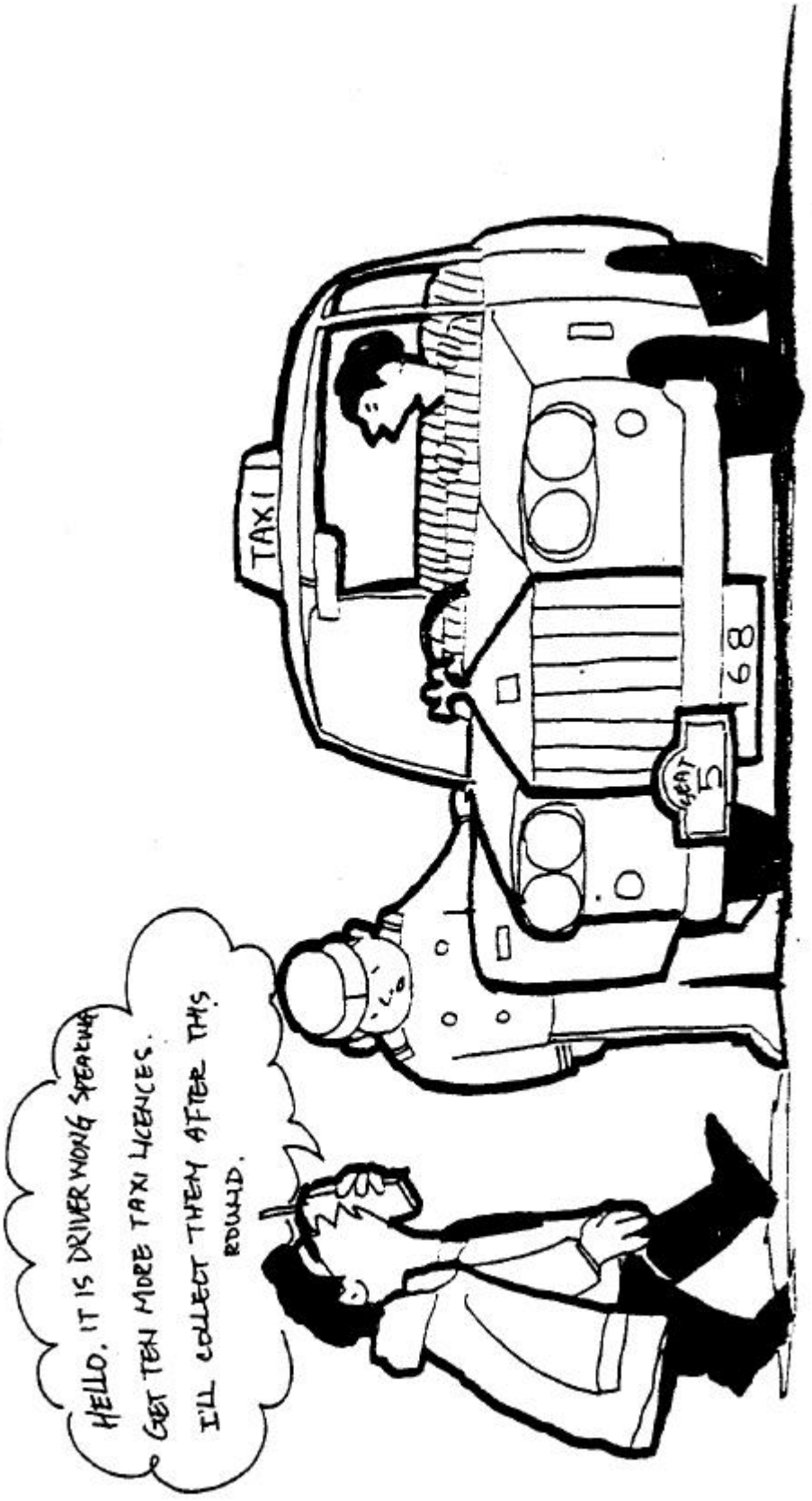
Suggested Teaching Time

2-3 periods

Further Development

With additional information from the newspaper, and modification of the hypothetical case, teachers can further pursue the case to teach expected gain and windfall profits.

RM 1.1


HELLO. IT IS DRIVER WONG SPEAKING. GOT TEN MORE TAXI LICENCES. I'LL COLLECT THEM AFTER THIS ROUND.
TAXI
SEAT 5
68

RM 1.2

The Story of Ah Kwai

Part A

Ah Kwai successfully bought a taxi licence in 1982 at a price of $200 000. He operated the taxi himself and derived stable income. He expected the price of taxi licence to go up in succeeding years.

Part B

But contrary to his expectation, the price of taxi licence dropped in 1983 and 1984.

Part C

Ah Kwai continued to hold the taxi licence. In Dec. 1991 his friends persuaded him to sell his licence at a price of $1 550 000 convincing him that he would gain a profit of HK$1,350,000.

RM 1.3

Average price of an urban taxi licence in government tenders

Date	*No. of Licences Issued*	*Average tender price ($)*	*% of change*
Feb 82	300	178,646	+4.0
June	300	183,023	+2.5
Sept	300	206,550	+12.9
Dec	300	182,674	-11.6
May 83	301	160,758	-12.0
July	301	143,864	-10.5
Oct	300	133,901	-6.9
Jan 84	300	140,221	+4.7
Apr	300	157,182	+12.1
July	300	164,886	+4.9
Jan 85	100	199,255	+20.8
June	100	219,771	+10.3
Jan 86	100	292,026	+32.9
June	100	372,042	+27.4
Jan 87	100	449,640	+20.8
July	100	597,122	+32.8
Feb 88	168	600,886	+0.6
July	100	694,443	+15.6
Sept 89	200	820,545	+18.2
Dec 90	150	909,562	+10.8
Dec 91	200	1,510,000	+66.0

(From newspaper cutting)

Suggestion 2

Topic: The problem of social cost

A Case study: A case of externality - Lead in Petrol

Objectives

At the end of the lessons, students should be able to:

(1) define external cost.

(2) identify the private costs, external costs and social costs of an action.

(3) explain how the divergence between private and social costs leads to inefficient allocation.

(4) suggest some traditional measures for correcting externalities.

(5) make comments on these measures.

Suggested Teaching Approach

Introduction:
The teacher introduces the concept of external cost to the students.

Class discussion:
The teacher asks students to bring news cuttings about externalities to the lesson. Then they are required to explain why they think externalities exist in each case.

Class study:
To arouse attention, students are given a cartoon picture RM 2.1 showing the external effect of lead in petrol.

With additional information, RM 2.2, let students discuss the questions that follow.

Conclusion:
In conclusion, explain to students that it is costly and also usually inefficient to reduce externalities by government intervention, though these measures are still in practice.

Suggested Teaching Time

3-4 periods

Further Development

Based on the comments on the traditional treatment of externalities, introduce Coase's view on this issue.

RM 2.1

A cartoon picture showing the external effect of lead in petrol.

LEAD IN PETROL

Lead is added to petrol with an aim of increasing the performance of car engines. Lead, however, goes into the atmosphere through vehicle emissions. It is believed that 95% of the lead content in air is resulted from car exhausts.

Lead affects cell and body processes. It can affect the brain, heart and kidneys. Studies show that lead does more harm to young children, with likely neuro-psychological effects.

In order to safeguard the health and well-being of the community, some governments have asked the petrol companies to produce unleaded petrol (ULP). The companies, however, were not in favour of this since it would involve them an enormous amount of money.

1. What are the external costs of using lead in petrol?
   Why do you think these are external costs?

2. Why don't petrol companies consider the external costs of their decision to produce petrol with lead added to it?

3. What are the means a government can use to encourage petrol companies to reduce the production of petrol with lead? Explain your answer.

4. What does the Hong Kong government do to discourage the consumption of petrol with lead?

5. What are the possible difficulties that the government will encounter in using the measures in (3) and (4)?

Suggestion 3

Topic : The problem of social cost

A problem solving : A numerical illustration of the Coase's Theorem - Cattle raising and wheat growing.

Objectives

At the end of the lessons, students should be able to :

(1) understand the implication of externality - potential gain from trade.

(2) find that the allocation of resources is the same under different assignments of rights, assuming zero transaction costs.

(3) find that different assignment of rights affect the wealth distribution only.

(4) understand that the Coase Theorem is actually a theorem of exchange.

(5) recognize the effect of transaction costs.

Suggested Teaching Approach

Teaching concepts:
The teacher introduces Coase's view on externality:
---externality implies the existence of inefficiency.
---inefficiency implies the existence of potential gain from trade.

Revision of concepts:
The teacher recalls students' memory about theorem of exchange.

Problem solving exercises:
The teacher asks students to solve the problem. Remind them that people are wealth maximizers. (RM 3.1)

Concluding discussion:
The teacher uses the Coase Theorem as a conclusion, and discusses with students the two important conditions for the theorem to be valid. (RM 3.2)

Suggested Teaching Time

5 periods

RM 3.1

A farmer grows wheat and a rancher raises cattle on adjacent plots of land. Assume no fence or natural boundary separates the two, and occasionally cattle stray into the planted fields and destroy part of the crops.

The following table shows that the rancher, in raising cattle, inflicts damage on crops:

herd size	marginal revenue ($)	marginal private cost ($)	marginal external cost (damage on crops) ($)
1	100	40	30
2	100	60	30
3	100	70	30
4	100	90	30
5	100	100	30
6	100	120	30
7	100	130	30

Questions:

1. If the rancher ignores the damage inflicted on the crops, what will be his herd size? Is it an efficient allocation? Explain your answer.

2. Assume all transaction costs are zero. If the farmer has the exclusive right to use the land so that the rancher is liable for any damages caused by his herd. What action will the two parties take? What will be the herd size?

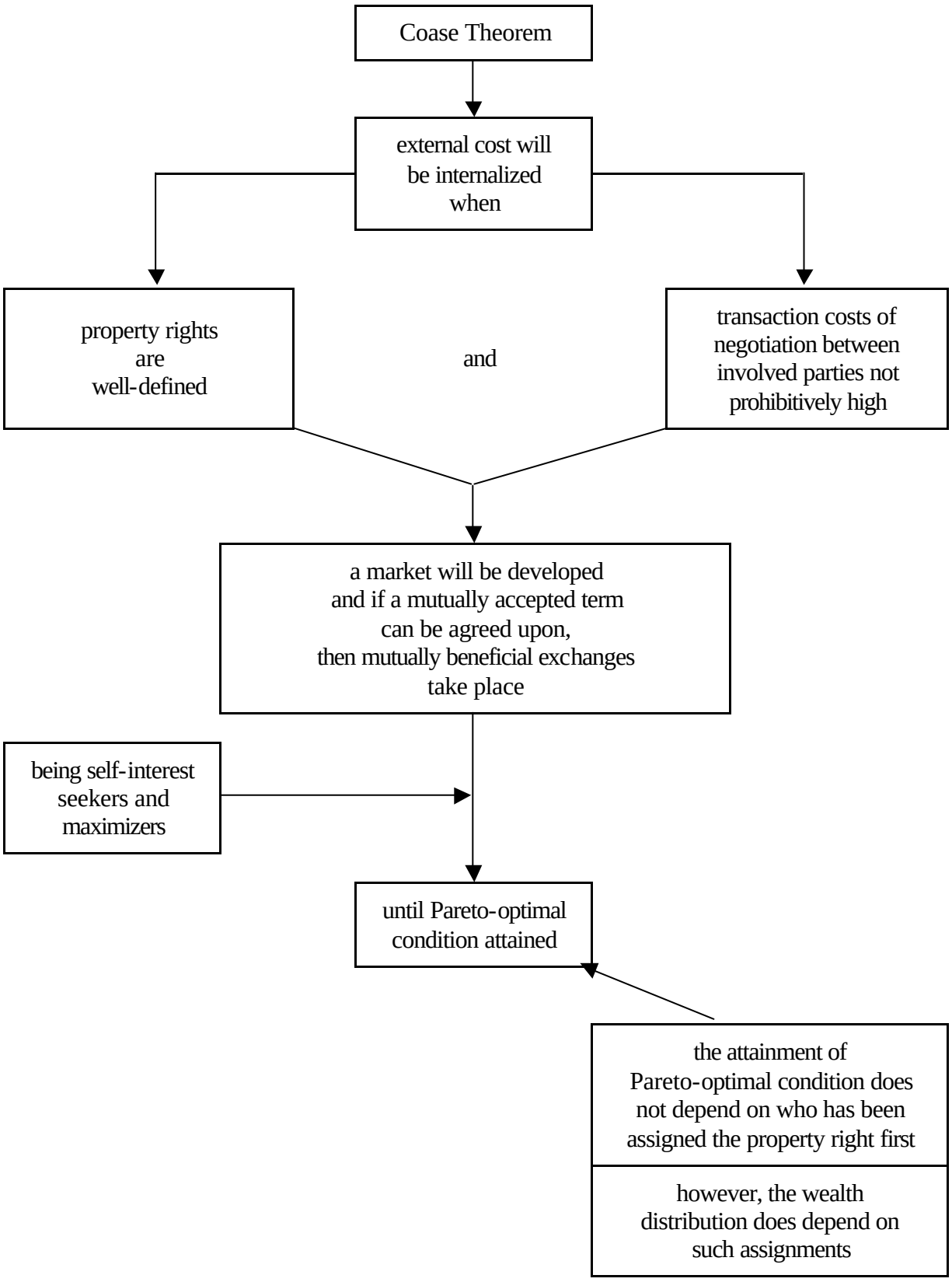
3. Again assume all transaction costs are zero. If the rancher is not liable for crop damage. That is, suppose the farmer has no legal recourse to seek compensation. What action will the two parties take? What will be the herd size?

4. Under the different assignments of right described in (2) and (3), are the two herd sizes the same? Is the wealth distribution in (2) same as that in (3)?

5. If there is transaction cost for the two parties to get a compromise, do you think the allocation of resources will be the same as in (2) and (3)?

RM 3.2

Concept Map on the Coase Theorem



Suggestion 4

Topic: Scarcity, competition and discrimination (non-price competition)

Teaching Materials:

Cartoon pictures

Objectives:

At the end of the lessons, students should be able to:

(1) understand that scarcity inevitably implies competitions of all sorts.

(2) explain that all forms of competition are discriminatory.

(3) compare the efficiency of the market mechanism and non-price competitions.

Teaching Approach:

Motivation:

Students are shown the cartoon pictures in RM 4.1 to 4.8.

Group discussion:

Arrange the students in small groups.

Students are then asked to discuss the following questions for each picture:

What are the competitors competing for in each case?

What give rise to competition? Explain in economic terms.

What is the form of competition?

Name the criterion/criteria of discrimination among competitors.

How do competitors spend their resources in meeting the criterion/criteria of discrimination?

Concluding session:

The teacher asks students to conclude the inter-relationship among scarcity, competition and discrimination.

From students' discussion, the teacher draws the point that non-price competitions give rise to inefficiencies as resources are wasted on equipping the competitors to meet the criteria of discrimination.

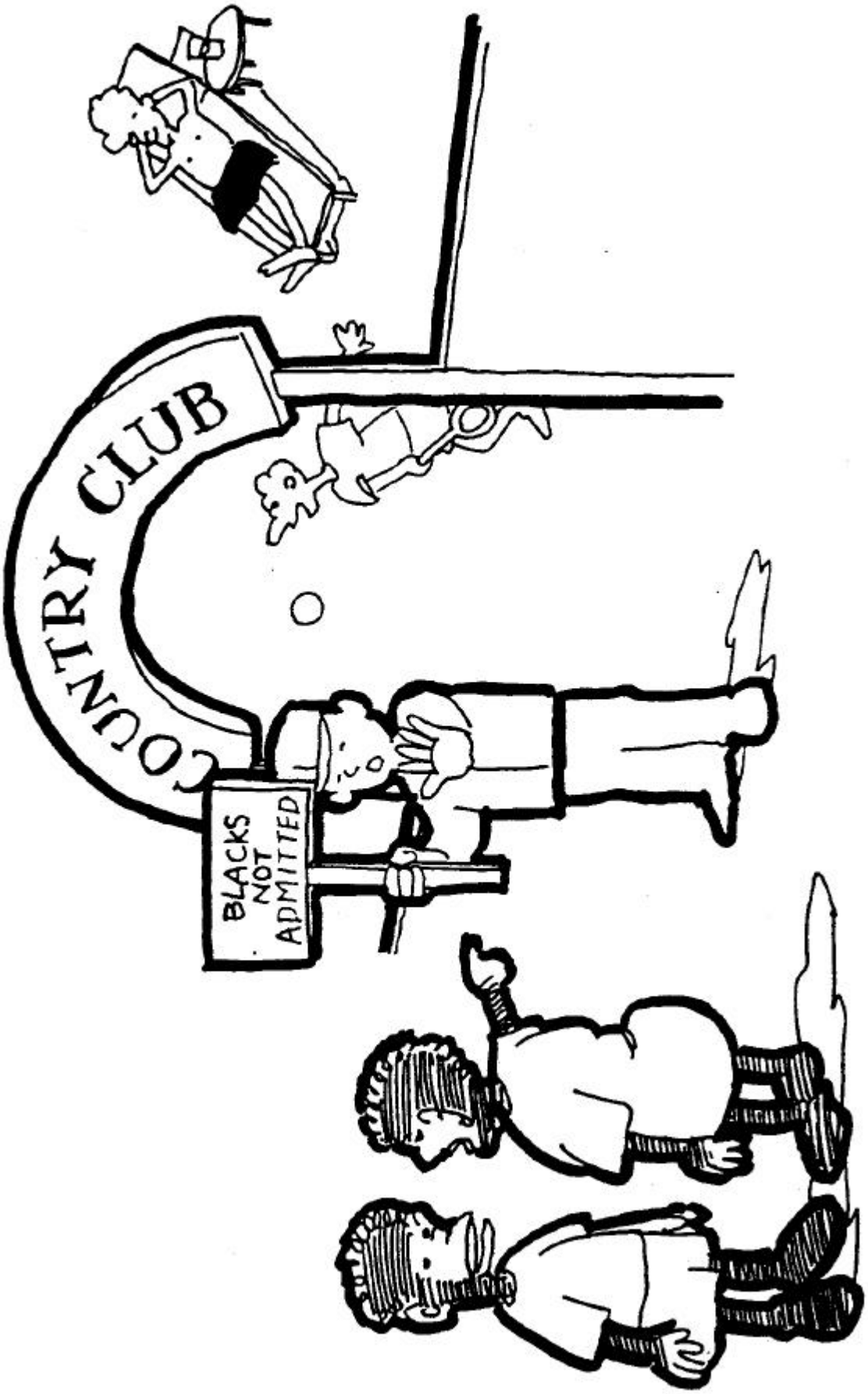
The teacher also draws students' attention to how the scarcity problems are solved under the market exchange system.

The teacher concludes that the market exchange system is the most efficient form of competition.

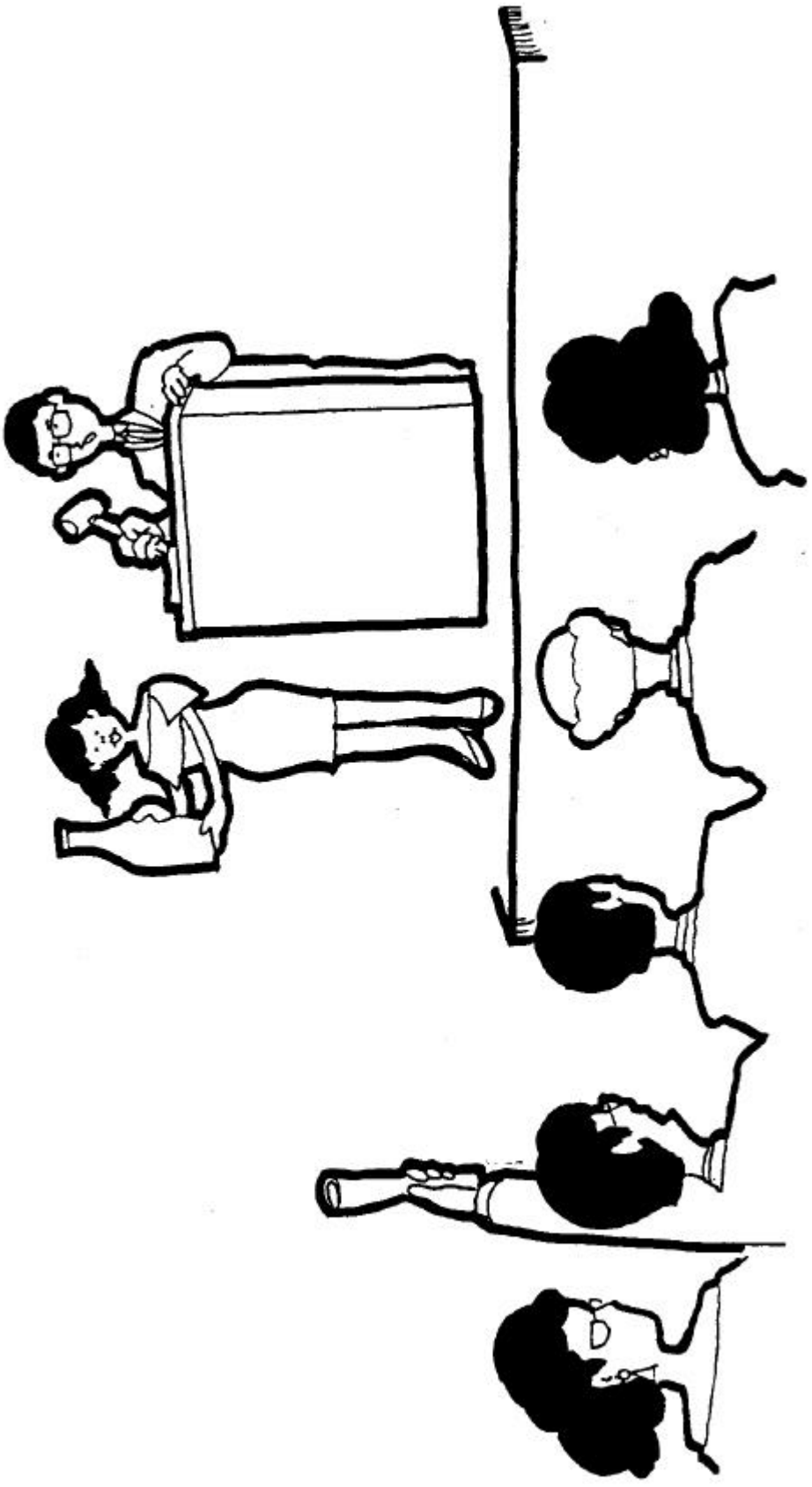
Suggested Teaching Time:

1-2 periods.

RM 4.1

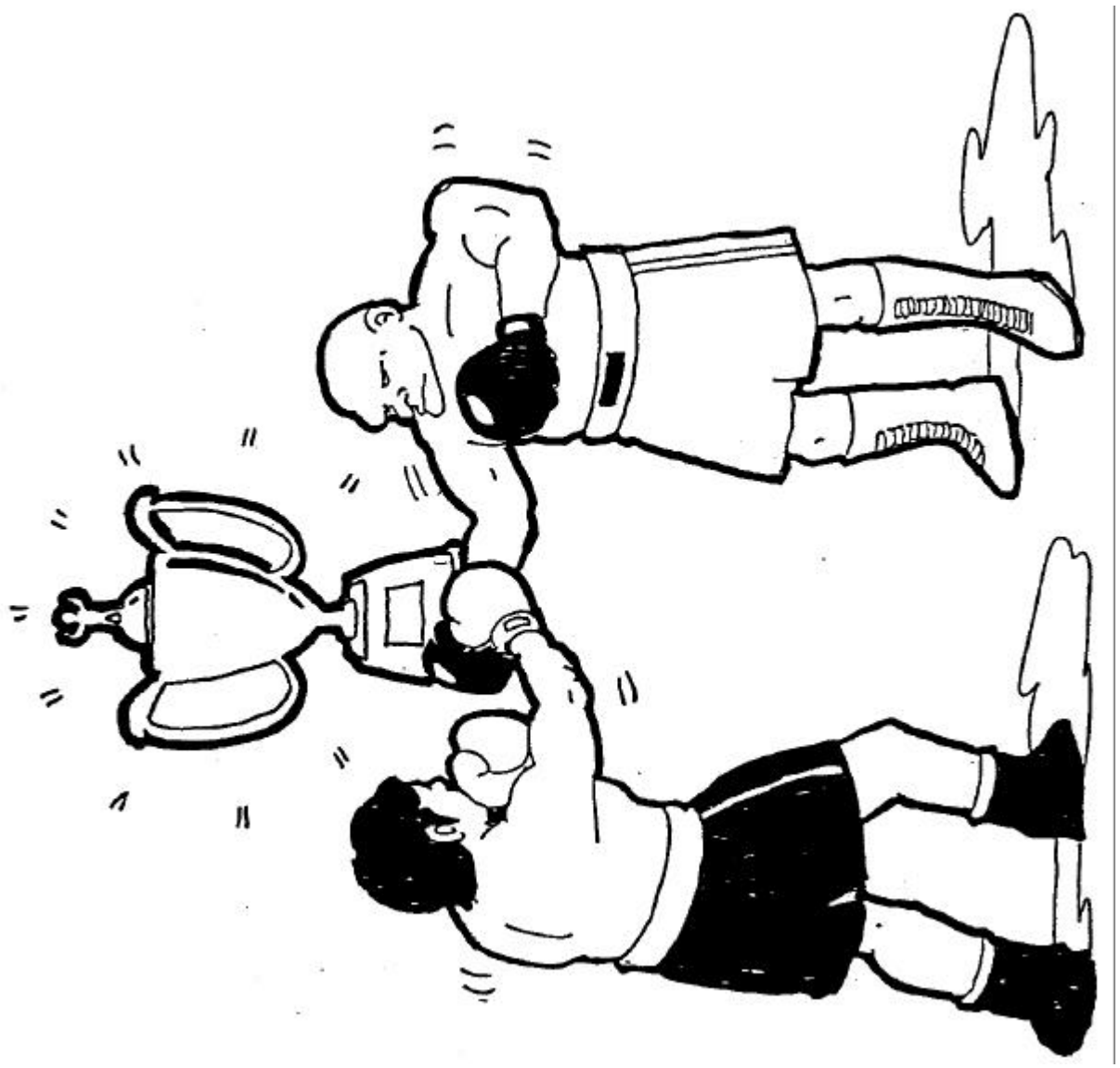


RM 4.2

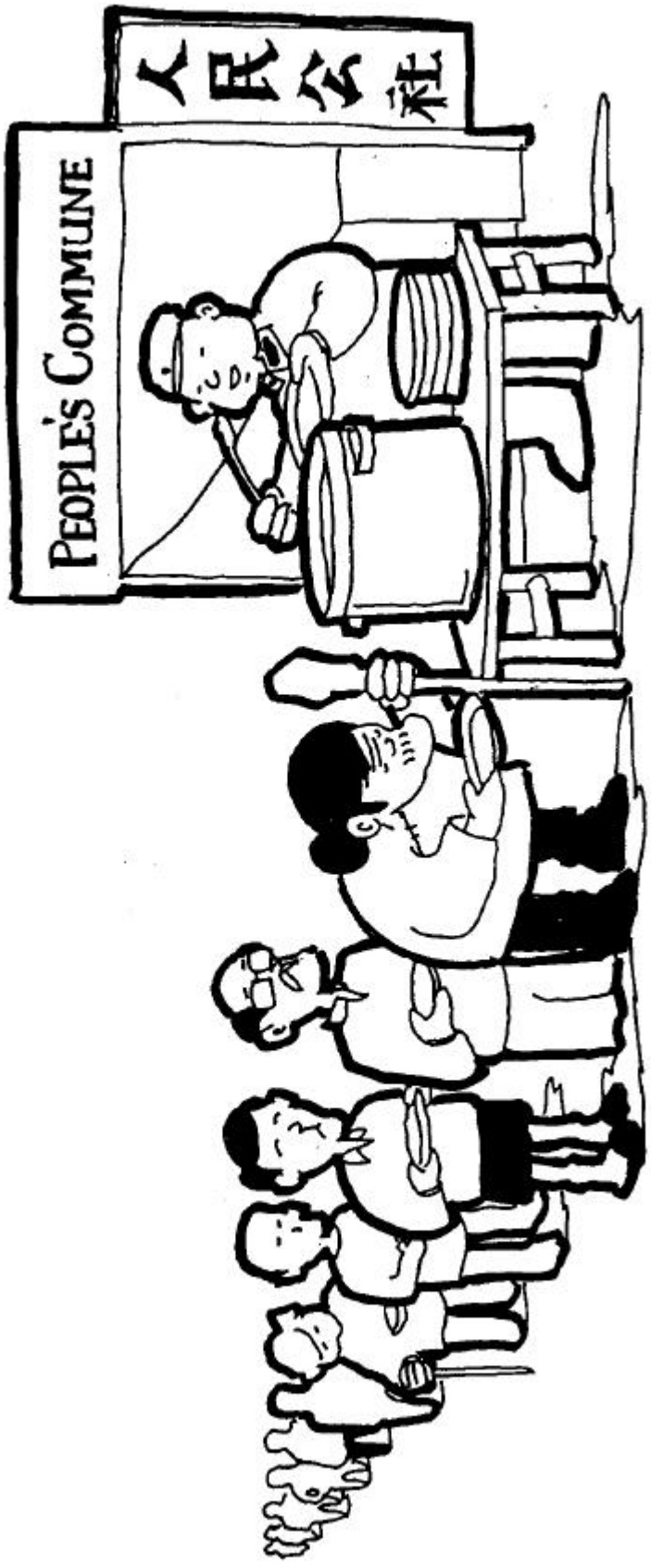


RM 4.3

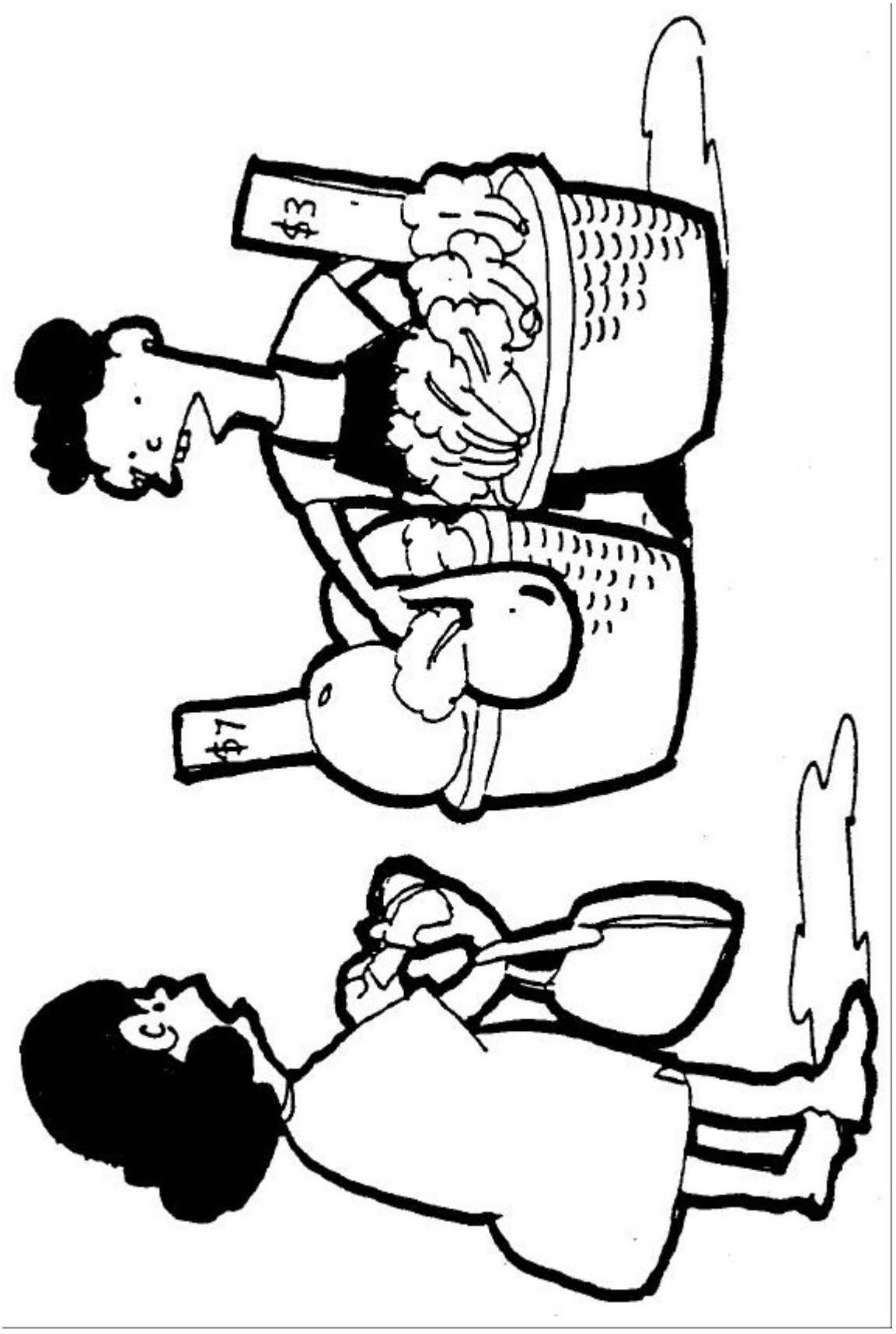
RM 4.4



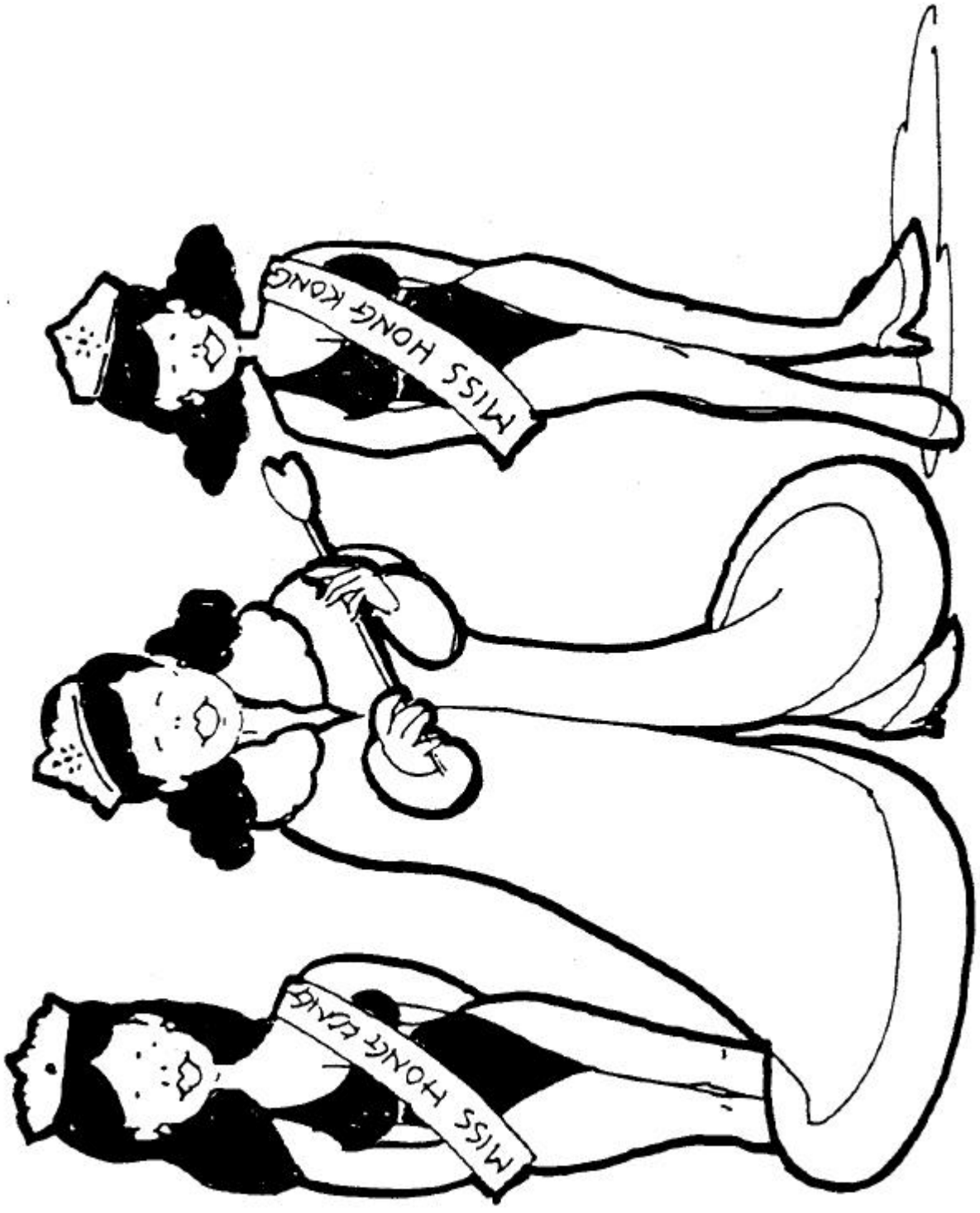
RM 4.5



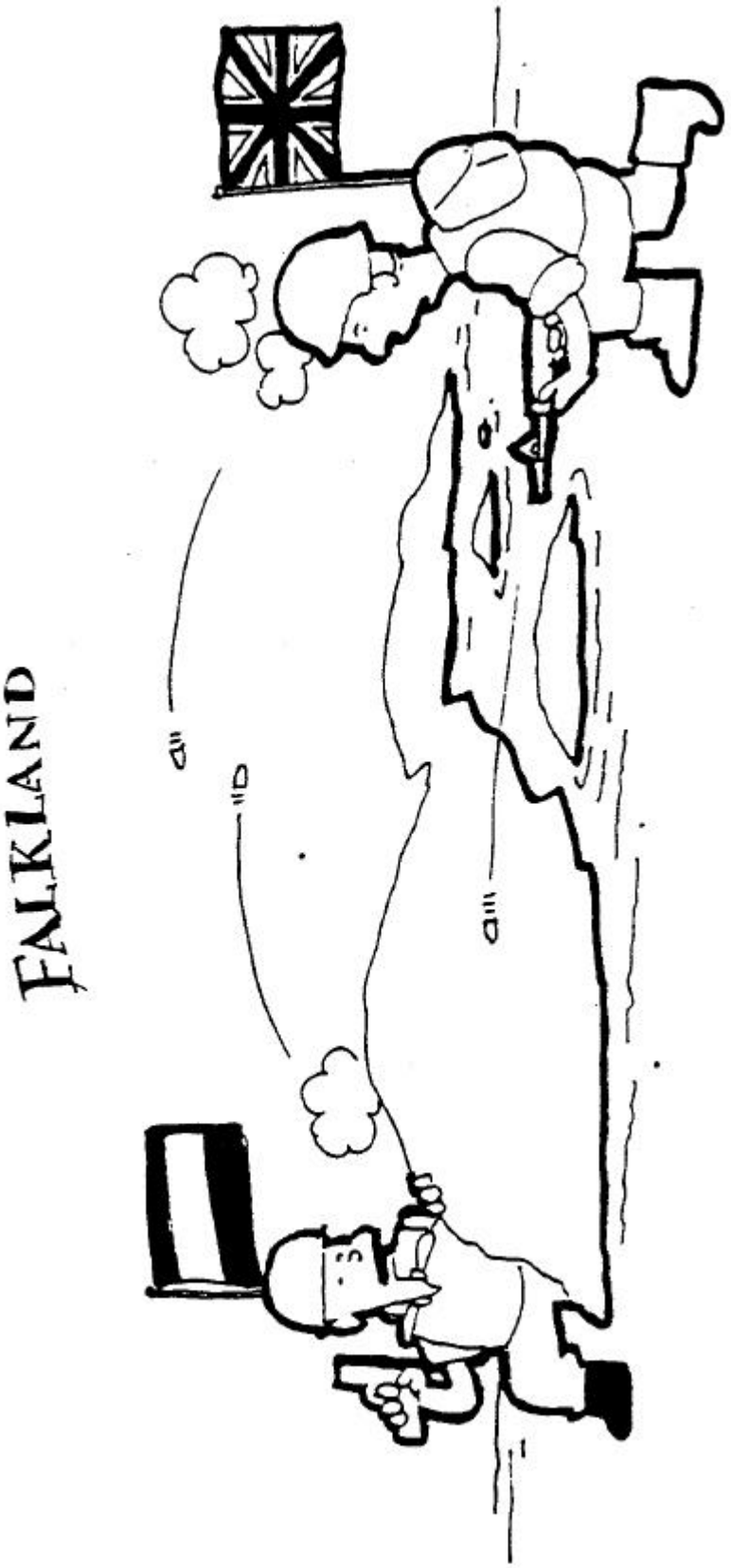
RM 4.6



RM 4.7



RM 4.8



Suggestion 5

Topic: Price Discrimination

A survey of students in preparation for classroom discussion.

Hypotheses to be tested in class:

(1) Only closed-market price-searchers can practise price discrimination.

(2) The markets in which different prices are charged must be separated in some way.

(3) Price discrimination will only occur when resale of goods and services provided is not possible.

Method of the survey:

Ask students to collect as many examples of price discrimination as possible.

Note the detailed information on the pricing policy of each firm or organization e.g. How many different prices are charged for the same product/service? What are the conditions that are imposed?

How is the market split?

Summary of survey findings:

Students are asked to summarize their findings by completing the following table:

Product/ Service	***Firm or Organization***	***Prices charged (per unit)***	***Market Structure***	***Types of Market Separation***	***Is the good/ service transferable?***
e.g. distant telephone calls	Hong Kong Telephone Co.	Peak hour charges Off-peak hours charges	Closed market price searcher	By time	No
		IDD charges Operator charges		By service	No

Uses of survey findings in class:

In class, students are asked to present their findings on the blackboard.

Then, ask them to assess how far do their survey findings support the hypotheses about price discrimination. If there are exceptions, ask students to offer explanation for them.

The teacher has to make sure that the examples quoted by the students are true examples of price discrimination. If not, explain to the students the reasons for their being wrong examples of price discrimination.