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THE EFFECT OF STRATEGY TRAINING IN THE COMPREHENSION OF ACADEMIC READING MATERIALS

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DECLARATION

I hereby declare that the work in this dissertation is my own except for quotations and summaries which have been duly acknowledge.

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ABSTRACT

Reading skills play an important role in mastering a language and knowledge. Therefore it is important to expose students to practice strategic reading habits since it will assist them to perform in academic journey. The current investigation aims to observe the effect of reading strategies training towards subjects' reading comprehension performance as well as the subjects' level of awareness utilizing reading strategies when they perform their reading tasks. The subjects in this investigation were 30 first semester students from the Commerce Department of Sultan Azlan Shah Polytechnic. 15 subjects were *Diploma of Marketing (DPR) students and another 15 subjects were Diploma of* Accountancy (DAT) students. DPR students were assigned to the experimental group meanwhile DAT students were assigned to the control group. The experimental group undergone 60 minute reading strategy training for 12 weeks meanwhile the control group did not receive any training. In order to observe the effect of the training, pre-test and post-test for reading comprehension test and survey on reading strategies (SORS) were administered to the experimental group. The pre-test and post-test were also conducted to the control group so that the performance for both group could be compared. The data obtained from the tests were analyzed via SPSS. The t-test conducted had revealed that the experimental group showed a significant improvement in reading comprehension test score and survey on reading strategy score. This evidence has proven that the reading strategy training exposed to the experimental group managed to facilitate the subjects to read and further perform better in comprehending the reading text.

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ABSTRAK

Kemahiran membaca memainkan peranan yang penting dalam menguasai sesuatu bahasa dan ilmu pengetahuan. Oleh itu adalah penting mendedahkan para pelajar untuk mempraktikan kaedah membaca yang strategik kerana ia boleh membantu mereka dalam menimba ilmu. Kajian ini bertujuan untuk melihat kesan latihan strategi membaca keatas pencapaian kefahaman dan tahap kesedaran di dalam penggunaan strategi ketika membaca bahan bacaan akademik dikalangan subjek. Subjek bagi kajian ini adalah 30 orang pelajar semester 1 Jabatan Perdagangan, Politeknik Sultan Azlan Shah. 15 subjek adalah pelajar program Pemasaran (DPR) manakala 15 subjek lagi adalah pelajar program Akauntasi (DAT). Pelajar program Pemasaran diletakkan sebagai kumpulan eksperimen manakala pelajar program Akauntasi diletakkan sebagai kumpulan kawalan. Kumpulan eksperimen menjalani latihan penggunaan strategi membaca selama 60 minit untuk 12 minggu manakala kumpulan kawalan tidak menjalani latihan berkenaan. Bagi melihat keberkesanan latihan, subjek diberi ujian kefahaman dan Survey on Reading Strategies (SORS) sebelum dan selepas mereka didedahkan dengan strategi membaca. Kedua-dua ujian ini turut dijalankan keatas kumpulan kawalan untuk dijadikan perbandingan. Data yang dikumpul dianalisa dengan menggunakan perisian SPSS. Hasil analisa t-test membuktikan kumpulan ekperimen menunjukkan peningkatan dalam prestasi kefahaman dan kadar penggunaan strategi membaca. Hasil analisa ini membuktikan latihan strategi membaca mampu membantu mereka dalam meninggkatkan kemahiran membaca dan tahap kefahaman mereka dalam memahami bahan bacaan akademik.

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LIST OF ABBREVIATIONS

ESL	-	English as Second language
GLOB	-	Global Reading Strategies
KBSR	-	*Kurikulum Bersepadu Sekolah Rendah* (New Primary School Curriculum)
KBSM	-	*Kurikulum Bersepadu Sekolah Menengah* (New Secondary School Integrated Curriculum)
L1	-	First Language
L2	-	Second Language
PROB	-	Problem Solving Strategies
SPM	-	*Sijil Pelajaran Malaysia* (Malaysian Certificate of Education)
SUP	-	Support Strategies
SBI	-	Strategies-Based Instruction
SORS	-	Survey of Reading Strategies

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CHAPTER 1

INTRODUCTION

1.0 Introduction

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This chapter discussed the background of the research. It illustrated the framework of the current research by providing the background of the study, the statement of problem, objectives of the study, research questions, significant of the study, scope of the study and definitions of terms.

1.1 Background of the Study

Reading is a fluent process of reader combining information from a text and their own knowledge to build meaning (Anderson, 1990). The process that is going on in a reader's mind is essentially unobservable. Despite the unobservable nature of reading, researchers are still able to get hold of valuable insight into reading. Investigation and inquiry conducted in relations to reading provide language teachers and language learners with

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rich information which can assist them to progress in language learning as well as in academic field.

Reading can simply be interpreted as the process of negotiating meaning between the reader and the written text (Grabe, 2002). A more complex definition is being suggested by Meena Singhal (1998). She defined reading as a meaning making process involving an interaction between the reader and the text.Vega (2004) stated reading as a cognitive process because it requires the utilization of certain mental and intellectual procedures and strategies. The definitions proposed by researchers are the representation of a complex process that going on in readers' mind. In reality, the process of reading itself is not as easy as it been defined. Many elements contribute towards the successfulness and the effectiveness of a reading process. Factors such as first and second language proficiency, prior knowledge, phonology, psychological process, motivation and strategies in reading are examples of variables studied by the researchers in order to understand more on the hidden process of reading. As for research in relation to reading strategies, there were a number of researchers that study on the characteristic of strategies employed by research participants such as Block (1986), Honsenfield (1984) and Anderson (1991). The participants of the studies were selected from various profile namely poor and good reader (successful and unsuccessful reader), ESL students, low and high proficiency students, adult reader and EFL students. Based on the findings obtained the researchers highlighted the pattern of strategies employed by the participants. They further suggest the strategies that can be employed in order to read effectively. Another issue observed by researches was reading strategies instruction or training. Carrell (1989), Tan and Bromely (2006) and Muniz-Swicegood (1994) were among the researchers that involved in studying the reading strategies training. The studies conducted were focused on developing strategies training framework and examining the effectiveness of reading strategies training. As a result, teachers and language instructors can get the benefit from the research's findings. They will be able to compare and contrast the effectiveness of reading strategies training proposed by researchers.

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As for this inquiry the major focus was to look at the effect of exposing students to reading strategies which it is believe that through the exposure the students are able to improve their comprehension towards the text. The exposure given is particularly to facilitate students to used and further assimilate the reading strategies when they are reading academic text and content. It is also hope that the exposure given will increase students' awareness in utilizing reading strategies in their reading activities.

1.2 Reading Difficulties

In second language classroom, students might encounter with a number of problem in their reading activities. The understanding towards difficulties and obstacles experienced by the student in their reading process is very important therefore the solutions can be proposed in order to overcome the issues.

Reading processes may be interrupted by disability to comprehend unfamiliar words such as technical terms or jargon in specific field. Complex sentences structure also may lead to difficulty in interpreting the content. Other than that, lack of background knowledge related to the content presented in the text also hinders the comprehension process. In addition, ESL students also unable to plan their reading process whereby in certain situation they tend to read word for word in order to interpret the text. In other words they are relying too much on understanding of individual words rather deductively interpreting the content. These habits are ineffective to be practice since the comprehension process will be distracted if the reader encounter with unfamiliar word. As for Block (2002) and Johnson (2002), they suggested that readers who struggle to attain a semblance of meaning from the text they are reading, do not contemplate a detailed relevance of unfamiliar words, thus creating a vague meaning of what is being read. As a result, comprehension becomes such a challenge that these readers disengage and refrain from meaning making.

Researchers have also discovered some weaknesses in ESL reader. Singhal (2001) mentioned that the unsuccessful reader on the other hand, lost the meaning of the

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sentences when decoded, read in short phrases, pondered over inconsequential words, seldom skipped words as unimportant, and had a negative self-concept. Meanwhile, Block (1986) highlighted that the "non-integrators" on the other hand, failed to integrate, did not recognize text structure, and were more reflexive in that they relied much more on personal experiences.

. Based on the researches' finding and classroom observation language practitioner are able to learn what are the problems and what are the causes of the reading problems experienced by the students. Therefore, it enables the teachers and researchers to formulate the solutions that can be used in order to help the reader to read successfully.

1.3 The Importance of Reading Strategies in Academic Setting

Ulijn and Salager-Mayer (1998) highlighted the fact that there is a close relationship between reading on the one hand, and school achievement and language development on the other. Further, they point out that learning, both in school and beyond, largely depends on information derived from texts. Therefore it can be signified that reading is essential in order to be success in academic field.

One of the ways to achieve successful reading is by utilizing appropriate reading strategies (Block, 1986). Reading strategies play an important role in the reading process. Block (1992) mentioned that when teaching reading, teachers cannot expect that second language readers will continue to meet easy-read texts as they go through school (Block, 1992). Therefore she suggested that one of the ways to help students to develop their reading skills is through teaching them awareness of the metacognitive process and of their strategic resource as this will give the students ways to keep on nourishing themselves through school.

In polytechnics teaching and learning setting, reading is a vital element which involve in students' academic journey. Through out the programme, students are required to involve in many activities and tasks such as completing assignments, taking quizzes and exam, preparing for oral presentation and etc. Therefore the skills to read efficiently

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are essential in order to cope with such a demand. Efficient reading skills can be a powerful tool for the students to acquire knowledge as well as to promote self-development. The ability to utilize and manipulate reading strategies will facilitate the students in solving any problems that they encounter when comprehending any reading task.

In real academic setting students usually encounter wide range of texts, as they are required to read the simplest text, for instance, advertisements to the most complicated technical texts from specialized journals. Hence, students need to be skilful and flexible in dealing with reading particularly why they read, how to read and what they need to take into account while reading. Zuraidah Zakaria (1999) mentioned that, it is of the utmost importance to possess appropriate reading strategies to enable students to effectively process text in their attempt to upgrade themselves in terms of knowledge. Therefore, exposing students to reading strategies training or instruction can be a promising approach in order to develop students' reading proficiency. According to Sengupta (2002) in order to help our students, we need to know how the new strategies and pedagogies impinge on the ways in which students approach reading in other academic subjects and whether making students' implicit models of reading explicit is going to change students' reading experiences in the real-life academic context .

To conclude, it is important to expose students to reading strategies therefore it can be a tool for them to manage their learning process. The awareness towards reading strategies can enable them to read and comprehend variety of texts which further facilitate the students in dealing with any task or courses requirement.

1.4 Reading Strategies Training

Language teaching and learning at primary (KBSR) and secondary level (KBSM) do expose students to four major language skills namely reading, writing, speaking and listening skills. However, there are limitations to heavily focus in each aspect of the four skills in the classroom. Time, syllabus, number of students and teachers' competency are

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some of the limitations which hinder the optimum exposure towards the four skills in the classroom.

As for reading skill, the syllabus outlined mostly focus on reading comprehension with a lack input on how to guide students to be a strategic reader. There is less exposure in invoking students' awareness towards utilizing reading strategies in order to optimize the comprehension as well as to overcome problems that related to comprehension process. Therefore students usually struggle in comprehending the text and they might find reading as a tedious process especially when they encounter a complicated content. In certain case, there are students who posses the skills, unfortunately, they don't know how to coordinate the strategies and to suite the text that they read. This is where reading instruction or training can comes into play whereby students can be exposed to the effective usage of the reading strategies. The fundamental hypothesis is that the processes or skills induced by the strategies become more habitual with practice. Therefore strategy training is introduced in order to provide the means to tackle complex problems in more efficient ways and, with practice, the strategies lead to skills that become automatic and quick over time. Carrell (1998) mentioned, students may have many misconceptions about the nature of reading and incomplete awareness of reading strategies, or of executive processes for monitoring and regulating comprehension, some researchers have called for fostering better metacognition and reading comprehension through direct instruction.

In the language classroom it is essential that teachers strive to increase students' awareness towards reading strategies, as that will help them decide on the most appropriate strategies for a given task. It is hopes that by introducing the strategies and how to utilize them, the students will be able to coordinate the use of strategy according to the needs of the text. In order to introduce reading strategies to second language students, the selection of training strategy framework is important to be put into consideration. The framework explains how the training will be conducted. There are a number of training frameworks that can be replicated in order to guide a training course. Winograd and Hare (1988), Cohen (1998) and Chamot (2005) were among the researchers who proposed the framework for strategies training. The frameworks outlined

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elaborate the steps needed in order to implement the training procedure. As an instructor it is important to understand and to be able to conduct the training as outlined by the framework chosen so that the students will be benefited by the training.

1.5 Statement of Problem

Learning and acquiring English language is an ongoing process in tertiary level of education. In Politeknik Sultan Azlan Shah Perak the importance of learning English is reflected through the implementation of English as medium of instruction in teaching technical and commercial subject. The change of medium of instruction in 2008 has brought a new challenge for students in their learning process. The current change requires students to be able to read in English as well as to comprehend the content of subject matter. To read in second language is not an easy task since students will encounter with a number of obstacles such as unfamiliar vocabulary, unfamiliar content, and technical terminology and so on. The comprehension process that takes place is also differ from one individual to another since personal factor such as motivation and proficiency level also influence the reading proficiency. In order to help the students in developing their reading proficiency as well as to handle a content specific text reading strategies training/ instruction can be an effective solution.

Therefore it is worth to investigate students' awareness in utilizing reading strategies in their reading process. Further, it is hopes that the exposure given will be able to improve their reading comprehension as well as to help the students to read efficiently.

The research questions addressed in this paper were as follows:

1. To what extend the reading comprehension score improved after the students are introduced to reading strategies training?
2. To what extend the level of awareness towards reading strategies improved after the students are introduced to reading strategies training?

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Two hypotheses were proposed in this study, i.e.

1. Students who receive reading strategies training will improve their reading comprehension as measured by reading comprehension's test.
2. Students who receive reading strategies will improve in term of reading strategies awareness evidenced by scores achieved in Survey of Reading Strategies Inventory (SORS).

1.6 Purpose and Objectives of the Study

There were a number of researches conducted in order to investigate the aspects that involve reading and specifically reading strategies. As for this study, it was focusing on the effect of reading strategies training towards students' comprehension in comprehending text which related to academic activities namely textbook, journal, article and etc. In addition, this investigation was also intended to examine the awareness in utilizing reading strategies posses by the students after receiving the treatment. Therefore this study was driven by the following aim which were:

1. to examine the different in terms of reading strategies used before and after the treatment.
2. to examine the different in terms of reading comprehension score obtained by students before and after the treatment.

1.7 Significance of the Study

Throughout the years studies on reading strategies has grown remarkably. Investigations in many aspects in relations to reading strategies are conducted in order to examine the issues related to the used of reading strategies in various context and across variety groups of subjects. As for this study, it is significant since it can contribute towards the

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growth of knowledge on reading strategies especially at polytechnics level whereby the ability to read effectively is an essentially skill for the students. Findings generated from this study will also help language teacher or language trainer to gain some insights regarding students' reading strategies and guidelines on the teaching and learning of reading therefore the students can practise and develop an effective reading habit. Besides, the knowledge obtained may also facilitate English teacher to review their teaching approach especially in order to plan reading strategies instruction in the language classroom. It is hope that through an effective reading strategies instruction, students so called "strategic reader" can be developed and nurtured.

1.8 Functional Definitions

There are a number of terms which require specific interpretations according to the research context. They are as follow:

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1. Reading

Reading is a cognitive process which requires the utilization of certain mental and intellectual procedures and strategies (Vega, 2004).

2. Reading for academic purposes

Reading for academic purposes (RfAP) is referring to reading activities which take place in an academic setting. For instance, reading textbook, journal, article etc. For the purpose of this study, RfAP is defined as purposeful and critical reading of a range of lengthy academic texts for completing the study of specific major subject areas (Sengupta, 2002).

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3. Reading strategies

In this study, reading strategies are those mental processes that reader consciously chooses to use in accomplishing reading task (Cohen, 1990). The reading strategies addressed in this study are divided into three groups according to the categories proposed by Mokhtari and Sheorey (2002). The groups are:

i. Global reading strategies

Global reading strategies are intentional, carefully planned techniques by which learners monitor or manage their reading process.

ii. Problem solving strategies

Problem solving strategies are the activities and procedures that readers use while working directly with the text.

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iii. Support reading strategies

Supporting reading strategies are basic support mechanism intended to facilitate the reader in understanding the text.

1.9 Limitation of the Study

Basically, the focus of the study was to investigate the use of reading strategies between two groups of students, namely are high proficiency group and low proficiency group. Therefore, the research has been designed to gather the intended data to meet this proposes. However, there were numbers of factor which can influence the findings since the reading process also involves other variable. The variable can be drawn out form two perspectives which are students' perspective and language learning perspective. In terms of the students' perspective, variables such as personality, gender, former education, motivation and attention span might affect the result of the research. From the language perspective, variables which might affect the results could include exposure towards the

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second language, first language interference and texts selected for the purposes of the study. It is important to note that the variables mentioned might have some influence towards the findings. However, the research design was not able to cater to all of the variables influence. Therefore, the findings of the current research cannot contribute towards a concrete generalization. Another issue which needs to be mentioned is the time constrain. The time constraint did not allow the researcher to intensively focus on a single subject therefore the researcher could not ensure that each subject able to grasp all the strategies taught. The findings might be different if researcher could be able to attend to each subject in facilitating them to learn the strategies.

1.10 Conclusion

This chapter discussed the background of the study. In this chapter the objectives and the research questions were outlined. In addition it also explained the significant of the studies as well as the limitation of the current investigation.

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CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

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This chapter elaborated the literature regarding reading strategies that will provide some background of the current study. The literature was focusing on reading strategies, metacognitive reading strategies, language learning strategies training and a number of previous researches were reviewed.

2.1 Reading Strategies

According to Block (1986) reading strategies indicate how readers conceive a task, what textual cues they attend to, how they make sense of what they read and what they do when they do not understand. As for Pinnell (2002), he describes that in order to comprehend reading texts, readers draw on both cognitive and linguistic strategic as well as a range of information within and outside the text. Definitions proposed by the researchers are varied and they also proposed their own description concerning the elements in reading strategies used.

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Block (1986) categorized reading strategies into two groups namely general strategies and local strategies. General strategies refer to strategies of comprehension gathering and comprehension monitoring strategies. They are as follows:

1. Anticipate content: The reader predicts what content will occur in succeeding portions of the text.
2. Recognize text structure: The reader differentiates between main points and supporting details or discussed the purposes of information.
3. Integrate information: The reader connects new information with those previously stated in the content.
4. Question information in the text: The reader questions the significance or veracity of content.
5. Interpret the next: The reader makes an inference, draw a conclusion or forms a hypothesis about the content.
6. Use general knowledge and associations: The readers may use their knowledge and experience to explain, extend and clarify the content.
7. Comment on behaviour or process: The reader describes strategy used, indicates awareness of the components of the process, or expresses a sense of accomplishment or frustration.
8. Monitor comprehension: The reader assesses his or her degree of understanding of the text.
9. Correct behaviour: The reader notices that an assumption, interpretation, or paraphrase is incorrect and changes that statement.

Local strategies on the other hand refer to the attempt to understand specific linguistic units. They are as follows:

1. Paraphrase: The reader rephrase content using different words, but with the same sense. This strategy is used to aid understanding, to consolidate ideas, or to introduce a reaction.
2. Reread: The reader rereads a portion of the text either loudly or silently. The use of this strategy usually indicates a lack of understanding. However, rereading may also give the reader time to reflect on the content.

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3. Question meaning of a clause or sentence: The reader does not understand the meaning of a portion of the text.
4. Question meaning of word: The reader does not understand a particular word.
5. Solve vocabulary problem: The reader uses context, synonym or some other word-solving behaviour to understand a particular word.

Pinnell and Fontas (2002) in Pinnell (2002) categorized comprehension strategies into two main groups, namely strategies for sustaining reading and strategies for expanding meaning.

The table below describes in greater detail the two categories of reading strategies.

Table 2.1.1

Strategies for Sustaining Reading

Strategy	Explanation
1.Solving words	-Using a range of strategies to take words apart and understand what words mean while reading.
2.Monitoring and correcting	-Checking on whether reading sounds right, looks right, and makes sense.
3.Gathering	-Picking up important information
4. Predicting	-Thinking about what will follow while reading a continuous text.
5.Maintaining fluency	-Integrating sources of information in a smooth operating process that results in expressive phrased reading.
6.Adjusting	-Reading in different ways as appropriate to purpose of reading and type of text.

Pinnell (2002: 109)

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Table 2.1.2

Strategies for Expanding Meaning

Strategy	Explanation
1.Making connections: Personal, world, text	-Searching for and using connections to knowledge that readers have gained through their personal experiences, learning about world and reading others text.
2.Inferring	-Going beyond the literal meaning of a text to think about what is not there but is implied by the writer.
3.Summarizing	-Putting together important information while reading and disregarding irrelevant information.
4.Synthesizing	-Putting together information from the text and from the reader's own background knowledge in order to create new understanding.
5.Analyzing	-Examining elements of a text to know more about how it is constructed
6.Critiquing	-Evaluating a text based on the readers' personal, world, or text knowledge

(Pinnell: 109-110)

Mokhtari and Sheorey (2002) also proposed another sets of strategies which consist of three main groups namely, global reading strategies, problems solving reading strategies and support strategies. The following outline is the detail description about the groups of reading strategies proposed by Mokhtari and Sheorey.

- **Global Reading Strategies**

  Global reading strategies are intentional, carefully planned techniques by which learners monitor or manage their reading process.
- Read with a purpose in mind
- Think about what I know to help me understand what I read (pre-information)
- Over all view of the text to see what it's about before reading

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- Decide whether the content of the text fits the reading purpose
- Review the text first by noting characteristics including length and organization
- When reading decide what to read closely and what to ignore.
- Use tables, figures, and pictures in the text to increase understanding
- Use context clues to help better understand the reading
- Use typographical features like bold face and italics to identify key features
- Critically analyze and evaluate the information presented in the text
- Check understanding when coming across new information
- Guess what the content of the text is about when reading
- Check to see if guesses about the text are correct

- **Problem Solving Strategies**

  Problem solving strategies are the activities and procedures that readers use while working directly with the text.

- Read slowly and carefully to make sure I understand what I'm reading
- Try to get back on track when distracted or lose concentration
- Adjust reading speed according to the reading material
- When text becomes difficult, pay closer attention to the material
- Stop from time to time and think about the reading
- Try to picture or visualize information to assist in remembering
- When text becomes difficult, re-read to increase understanding
- When reading, guess the meaning of unknown words or phrases

- **Support Reading Strategies**

  Supporting reading strategies are basic support mechanism intended to facilitate the reader in understanding the text.

- Take notes while reading to assist in understanding
- When text becomes difficult, read aloud to assist in understanding
- Underline or mark-up information in the text to assist in remembering
- Use reference materials (dictionaries, etc.)
- Paraphrase/restate to better understand

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- Go back and forth in the text to find relationships among ideas
- Ask self questions to find answers in the text

Basically, it is can be concluded that most of the strategies outlined by the researchers are sharing some similar elements however the way it been classified are different according to the researchers perspective. Despite the differences in terms of categorizing the strategies, the framework outlined by the researchers is very informational. It can be a resourceful input for language teacher in order to examine the strategies posses by the students as well as in order to develop any training courses.

Another implication from the researchers conducted is that language teacher is more aware on the importance of introducing reading strategies in language classroom. The importance of reading strategies has been highlighted by Kletzien (1991). She mentioned that when readers encounter obstacles to their comprehension, they need to utilize strategies to overcome their difficulties. Therefore the recognition towards reading strategies is vital to language learners since they will encounter various kinds of text with different level of difficulties. The ability to recognize and utilize appropriate reading strategies in reading can facilitate better understanding. Hosenfeld (1984) as cited in McDonough (1995) has identified 16 strategies which utilized by successful readers. According to Hosenfeld's investigation, successful readers utilized the following strategies:

- Keep the meaning of the passage in mind.
- Read in broad phrases
- Skip inessential words
- Guess from context the meaning of unknown words
- Have a good self-concept as a reader
- Identify the grammatical category of words
- Demonstrate sensitivity to a different word order
- Examine illustration
- Read the title and make inferences from it
- Use orthographic information
- Refer to the side gloss
- Use the glossary as a last result

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- Look up words correctly
- Continue if successful at decoding a word or phrase
- Recognize cognates
- Use their knowledge of the world
- Follow through with a proposed solution to a problem
- Evaluate their guesses

It can be inferred that researches and investigations conducted has provided language practitioner with useful information regarding the reading process. Further, the input also can be a powerful tool to facilitate the language learner in their learning process. Therefore, teachers need to make used of the reading strategies proposed by the researchers as a source of leaning.

As for the purposes of the research, reading strategies proposed by Mokhtari and Sheorey (2002) was selected as a guideline in training the research participants. Reading strategies outlined by Mokhtari and Sheorey was comprehensive yet practical. In addition Mokhtari and Shoerey also developed an inventory called Survey of Reading Strategies (SORS) which able to assess the learners' awareness in utilizing the reading strategies taught.

2.2 Metacognitive Reading Strategies

Another essential element in reading strategies is the ability to coordinate and to use the strategies learnt efficiently in order to facilitate the comprehension process. In other words it is called metacognitive reading strategies. Baker and Brown (1984) as cited in Singhal state metacognitive knowledge or awareness is knowledge about ourselves, the task face, and the strategies employ. As for Lawrence (2007) metacognitive reading strategies are those strategies which involve self-reflection and thinking about reading and learning. Basically, to help the language learner to be an efficient reader, it requires more that teaching them what are the reading strategies. Therefore, it is also important for the teacher to develop the learners' awareness regarding how to maximize the benefit of utilizing the reading strategies.

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2.3 Language Learning Strategies Training

In general language learning strategies training are commonly discusses in facilitating second language and foreign language learning process. Researchers believe that strategies training are beneficial in maximizing language learning opportunity to second language and foreign language learner. Cohen (2003) mentions this approach (strategies training) is based on the belief that learning will be facilitated by making students aware of the range of strategies from which they can choose during language learning and use. A number of language strategies training frameworks have been proposed by researches such as Pearson and Dole (1987), Oxford et al. (1990) and Chamot and O'Malley (1994). Cohen (2003) also addresses several instructional models that have already been developed and implemented in a variety of educational settings. The instructional models discussed by Cohen (2003) are as follow:

- General Study Skills Courses. These courses are aimed to cater for students with academic difficulties as well as to successful students who want to improve their study routines.
- Awareness Training: Lectures and Discussion. This instructional model is intended to develop students' awareness towards language learning strategies that can facilitate them in accomplish various language tasks.
- Strategy Workshops. This model is used in order to expose students to language learning strategies in intensive program which it is aimed to increase students' awareness of strategies through various consciousness-raising and strategy-assessment activities. The workshop involves lectures, hands-on practice with specific strategies, and discussions about the effectiveness of strategy use.
- Peer Tutoring. This approach require students to have regular meetings, alternate roles of learner and teacher, practice the two languages separately, and devote equal amounts of time to each language. Usually, students exchange ideas about the language learning strategies they use, consequently providing an ad hoc form of strategy training. This approach is valuable in facilitate students with low proficiency language level.

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- Strategies in Language Textbooks. This approach is quite common nowadays. There are many foreign language textbooks incorporate strategies published. The advantage of using the textbook is that it is capable to reinforce strategies use across both tasks and skills, encouraging students to continue applying them on their own.
- Videotaped Mini-Courses. This model developed by Rubin (1996). It is an interactive videodisc program and accompanying instructional guide aimed at raising students' awareness of learning strategies and of the learning process in general, to show students how to transfer strategies to new tasks and to help them take charge of their own progress while learning the language (Cohen,2003).
- Strategies-Based Instruction (SBI). Cohen (2003) describes SBI as a learner-centered approach to teaching that extends classroom strategy training to include both implicit and explicit integration of strategies into the course content. The model involve a systematic process whereby instructor may conduct SBI instruction by starting with established course materials, then determining which strategies to insert and where; starting with a set of strategies they wish to focus on and design activities around them; or inserting strategies spontaneously into the lessons whenever it seems appropriate (e.g., to help students overcome problems with difficult material or to speed up the lesson).

All instructional models highlighted by Cohen are generally pertinent to language learning strategies which can be applied in teaching the four language skills. Based on instructional models researchers come out with more specific strategies training framework which intended to cater for individual language skills uniqueness.

Under strategies-based instruction umbrella itself researchers have developed models of language learning strategy instruction. The strategy instruction models are constructed based on developing students' knowledge about their own thinking and strategic processes and encouraging them to adopt strategies that will improve their language learning and proficiency (Chamot, 2004). Cohen (1998) introduced Styles and Strategies-Based Instruction (SSBI), Cognitive Academic Language Learning

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Approach is developed by Chamot et al. (1999) and Grenfell and Harris (1999) also introduce their own instruction model. All of these models illustrate the stages of providing instruction to facilitate language learner in learning how to learn the strategies and how to organize their own learning process.

2.4 Reading Strategies Training

In order to facilitate language learners in mastering the four language skills, researchers have generated specific strategies training instruction that can address the uniqueness of each skill. In case of reading skill, researchers have structured several reading strategies training instructions which also share some similar characteristics with language learning strategy instruction models.

In specific to reading strategies training Paris and Winograd (1990) as cited in Mokhtari and Reichard (2002) state researchers have shown that students' awareness of their own reading comprehension processes can be enhance via systematic , explicit instruction or training. This statement reflects that it is important to provide students with reading training since it can promote strategic reading habit among second language learner. The awareness towards reading strategies can be a powerful tool which can help the students in order to be a competent reader. In order to implement the reading strategies instruction in language classroom, well-plan training strategies is required. There are a number of frameworks proposed by the researchers in planning reading strategies training. Janzen (2002) outlined a procedure for reading strategies instruction which consist of five stages;

- explicit discussion of what reading strategies are along with where, when, and how to use them;
- teacher modeling of strategic reading behaviors,
- student reading-and-thinking-aloud while practicing targeted strategies;
- classroom discussion; and
- adoption of a sustained area of content for the course.

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Another framework is proposed by Winograd and Hare (1988) as cited in Carell (1998). They have outlined five elements as a framework in developing reading strategies instruction. The five elements are ;

- what the strategy is,
- why a strategy should be learned,
- how to use the strategy,
- when and where the strategy should be used,
- how to evaluate use of the strategy

It is important to note the process of developing competent readers is a long process. However with well-plan training and well-conduct training it is possible for language teacher to enhance students' awareness towards the utilization of reading strategies as well as to increase students' comprehension towards the text. Carrell (1998) elaborates with teachers explaining and modeling use of a wide variety of reading strategies, scaffolding student practice and application, providing re-explanations and additional modeling as necessary and helping learners to experience reading strategies as personal cognitive and metacognitive tools for making meaning, reading strategy use should be seen not as means to pursue a "correct" in-the-text meaning, but as long-term means to personal understanding and interpretation of text. Through out the process teacher as well as students needs to play an active role in teaching and learning therefore training can be an effective process.

2.5 Studies in Reading Strategies Instruction

Since early 1970s, the interest towards reading strategies has grown. The interests grown since reading strategies do influence language competence development and it also vital in designing reading instruction and reading program. Language learners need to be exposed to reading strategies so that they can put it into practice and on the other hand academicians need to explore more on reading strategies so that they can cater the needs of the students. There are a number of researches which examine the effect of reading strategies instruction in classroom.

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Majid (2005) conducted an experimental investigation to examine the effect of strategies based instruction on students reading comprehension of ESP text. The aim of this investigation is to evaluate the effect of explicit training of a selected number of cognitive reading strategies on students' comprehension of ESP texts. The investigation is conducted to two groups of participants each comprising of 32 female and male students studying "Aquaculture and Fisheries Sciences" in Mirza Hoochak Khan Higher Fisheries Education Centre. The participants were assigned into experimental group and control group. In this study, the experimental group received 13 weeks of training which design to expose the students to the cognitive reading strategies selected. As for the control group, there are studying the same subject but without any exposure towards the reading strategies instruction. The findings of this investigation reveal a gradual transition in experimental group in terms of students' understanding of reading texts. The findings also show that the explicit reading strategies instruction might also have stimulated the transfer of the strategies from their native language to the current process of reading comprehension of reading text. The researcher concludes that the majority of experimental group demonstrated effective reading behaviour during the study.

The next investigation was conducted by Muniz-Swicegood (1994). She was looking into the effects of metacognitive reading strategy training on the reading performance and student reading analysis strategies of third grade bilingual students. The participants of this study were 96 third grade bilingual Spanish dominant students. The students' second language was English. The participants were randomly assigned into experimental and control group. The experimental group was trained to utilized reading strategies for 90 minutes each day for six weeks during the Spanish reading period. As for the control group, the group was instructed with third grade Spanish basal readers that had been adopted by the school district. The findings indicate that there was a significant improvement in terms of types and frequency of metacognitive strategies that the children were using during their Spanish reading. The main area which showed the improvement was in the used o self-generated question in experimental group. The experimental group also showed that they utilized the metacognitive reading strategies after received the treatment. From the findings, the researcher also concluded that there was a possibility that the children were transferring the metacognitive training from the first language to the second language.

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Handyside (2007) conducted an investigation to study the effects of metacognitive training on English language learners reading comprehension. The subjects were 33 Spanish speaking student age of nine and 11 with basic and intermediate level of English language proficiency. They were randomly assigned to four groups according to specific treatment exposed to them. Group 1 and group 2 received metacognitive strategy training in English only (monolingual condition) meanwhile group 3 and 4 received strategy training in English plus Spanish (bilingual condition). A 2 x 2 x 2 x 6 factorial design was employed in this study. The training was conducted based on Chamot and O'Melley's (1987) instructional model. The model was focusing on explicit, direct instruction on how to use and monitor reading strategies. In the experiment, the subjects attended 90 minutes sessions twice a week for 6 weeks. Two additional weeks was allocated for the subjects to attend extra practice sessions. In order to elicit the effect of the training the subjects were given post-test and pre-test standardized measures of reading comprehension. In addition another pre-test and post-test were conducted using Metacomprehension Index in order to obtain a qualitative measure of strategy awareness. The findings indicate that there were significant differences in metacognitive awareness between pre-test and post-test. After the subjects were exposed to the strategy training, it can be observed that there was an improvement in term of metacognitive awareness in the six selected reading strategies namely predicting, previewing, determining the purpose of reading, using background knowledge, self-questioning and summarizing. The finding also shows that language proficiency is an essential factor that affects the reading comprehension. Handyside (2007) concludes that regardless of language instruction, participating subjects increased their strategy awareness in selected reading strategies in six selected reading strategies and that the gain in reading comprehension may be the result of strategy use and extra practice rather than the language of instruction used to deliver the instruction.

Salataci and Akyel (2002) studied the possible effects of strategy instruction on L1 and L2 reading. The study was conducted to 20 students who enrolled in pre-intermediate level classes of a one-year intensive English course offered at the foreign language department of the Turkish medium Istanbul Technical University. The subjects were exposed to a 4 -week course (3 hour a week) on reading strategies. Throughout the course the subjects were taught using two training method which are

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the experience-text-relationship (ETR) and Reciprocal Teaching. The aim of introducing the subjects to the course is to facilitate them to develop their background knowledge of text and monitor their comprehension and become aware of strategies they utilized during the reading process. In order to examine the effect of the course, Salataci and Akyel used think-aloud protocols, observation, a background questionnaire, a semi-structured interview and the reading component of the PET (the Preliminary English Test). The data analyzed show that the reading strategy instruction which the participants were exposed to English affected their use of reading strategies in Turkish and English, indicate that the process of transfer is bi-directional interactive. Therefore, the strategies of prediction, summarizing and using prior knowledge were used extensively both in Turkish and in English after the instruction.

Tan and Philip (2006) investigate how a teacher and ESL learners can successfully engage in mutual regulation of strategy used as they co-construct meaning from the reading text. The study was conducted to 45 undergraduates who previously completed their diploma course in UiTM. The subjects were categorized into two groups which are high proficiency (HP) and low proficiency (LP) group. Then they were exposed to Metacognitive Strategy Instruction which comprises explicit direct explanation of learning strategies. The learning strategies introduced to the subject involve macro strategies such as planning, comprehension monitoring, problem solving, evaluating and monitoring. In the next stage, the subjects were trained to employ the strategies using a strategic framework approach namely Self-regulated Learning Approach to Strategic Learning (SRSL) to construct meaning from the context. In order to examine the impact of the instruction a qualitative retrospective written recall protocol (RWP) was used. The protocol elicits the subjects' point of view after they had undergone the instruction. The accounts of subject opinion regarding the instruction were divided into four macro strategies. The data gathered indicate that HP learners employed all four micro strategies to facilitate them in constructing the meaning. As for LP learners, the data shows that they do received an impact from the instruction. However the at certain level of macro strategies LP learners react slightly different. LP learners did not seems to have a strong sense of metacognitive awareness and they are practice less strategic and

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reflective .In conclusion, the finding revealed that both high proficiency and low proficiency learner benefited significantly from the instruction session.

All of the studies discussed in the literature utilizing variety approaches in term of instruction framework and training implementation. As suggested by Cohen (2003) the guidelines for implementing strategy training programs provide a variety of options for tailoring the training to meet the needs of a large number of students, as well as to the needs of the individual institution or language program. This explains the differences in the studies discussed. Each instruction program designed needs to be constructed and planned by considering the participants' needs, the available resources (e.g, time, money, materials, availability of teacher trainers), and the feasibility of providing the instruction (Cohen, 2003). Despite the differences, the results obtained still indicate that there are positive outcome that can be elicit form training. All of the studies note that the strategies training exposed to the subjects managed to facilitate language learners to improve their reading strategies and do help them to increase their awareness in monitoring their reading process.

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2.6 Conclusion

Basically, this chapter highlighted the theoretical aspect of reading strategies, metacognition and reading strategy training. This chapter also reviewed the previous researches conducted on reading strategies training which was important in order to obtain the insight of reading strategy training.

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CHAPTER 3

METHODOLOGY

3.0 Introduction

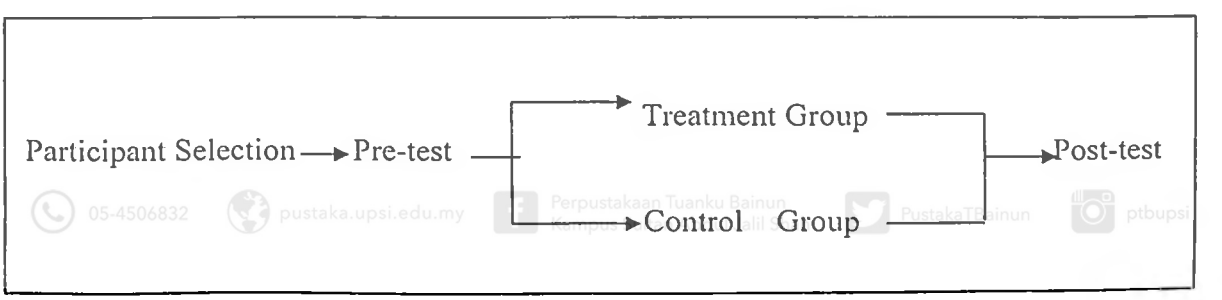
This chapter explained the design and methodology of the research. It described how the respondents were selected, what were the instruments used and how the data were analyzed.

3.1 Design of the Study

The quasi- experimental design implemented in data collecting method was non-equivalent control group design. According to Sowell (2001), as for this design, however, intact classrooms of participants, rather than individuals, were assigned at random to treatment and control groups.The following is a diagram which illustrates the design selected.

Figure 3.1

Non-equivalent Control Group Design



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As for this experimental investigation, two intact classes were selected and the participants were divided into treatment group and control group. The treatment group received reading strategies training as for the control group they were not exposed to reading strategies training. The data collected from the pre-test and post-test was analyzed and compared.

3.2 Participants of the Study

The research subjects were two intact classes of semester one Commerce Department students. They enrolled to the courses after they have completed their Sijil Pelajaran Malaysia (SPM). Both groups consist of mixture both male and female participants. The selected classes were Diploma in Accountancy students (n=15) and Diploma in Marketing (n= 15). Both groups registered to the same course which was Principles of Economic as their compulsory subject. The content of the course (Principles of Economic) later was used as the subject matter throughout the reading strategies training. Basically, semester 1 students were selected for the experiment since they represent a group of students who freshly venturing tertiary level of education. These groups of students will eventually experience more complex reading task as they completing their six semester studies. Therefore they were chosen to participate in the study with a hope that the study will be able to obtain valid evidence that reading strategies training is relevant in order to help students to excel in their academic journey.

3.3 Sampling Procedure

The technique of sampling in this research was convenience sampling. This technique involves selecting a sample according to the availability in order to get a convenient access to obtain the data. As for this investigation, two intact classes of Diploma in Accountancy students (n=15) and Diploma in Marketing (n= 15) were randomly assigned to control group and treatment group. The classes selected since it is feasible for the researcher to obtain the data and managing the treatment as the researcher is

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the programme coordinator for these classes. The process of data collection and treatment were conducted after class hour. This is to avoid interruption to the teaching and learning process that the students have been scheduled throughout the semester.

3.4 Research Instruments

There were two research instruments used in order to obtain the data for the purposes of this investigation. Survey of Reading Strategies (SORS) was used in order to assess students' metacognition level of awareness before and after the treatment. While reading comprehension test was used in order to assess students' changes in terms of reading comprehension score after the treatment was given.

3.4.1 Survey of Reading Strategies (SORS)

SORS is a self- reported inventory. There are 30 items in the SORS (Appendix A), and each item uses a 5-point Likert Scale ranging from 1 ("I never do this") to 5 ("I always do this"). The inventory was constructed by Mokhtari and Sheorey (2002), in order to assess second language students' awareness of reading strategies when they are reading academic text. There were 30 items presented in the inventory. The items were categorized into three groups namely; global reading strategies (GLOB), problem solving strategies (PROB) and support strategies (SUP). Global reading strategies consist of 13 items that related to those intentional, cautiously planned techniques by which learners monitor or manage their reading such as having a purpose when reading, previewing the text as to its length and organization or using typographical aids and table. As for problem solving strategies, there were 8 items that reflect the action and measures that readers use while dealing directly with the text. For instance, regulating one' speed of reading, guessing meaning according to context and reread the text. The third category is Support Strategies (SUP). There are 9 items that elaborate the basic support mechanism intended to facilitate the reader in interpreting the text such as using dictionary, taking notes, underlining or highlighting information.

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The self- reported inventory is selected as one of the instruments in order to collect data because it is provide a comprehensive assessment that can elicit the input from the subjects personally. Moreover, the inventory is designed exclusively for adult second language learner with an easy to comprehend items as well as it is easy to administer. In order to obtain the data, subjects were asked to circle the items that applied to them, indicating the frequency with which they used the reading strategy described in the statement. As all the statements in the SORS are positive, the higher the number, the more frequent the use of the strategy concerned. For every subject, the score obtained for each strategy was transferred onto the scoring sheet. The total scores were then added up and divided by 30 (the total number of items) to obtain the average response or score for the entire inventory. The overall average score indicates how often learners use the strategies listed in the instrument when reading academic materials.

In order to obtain the average response or score for each strategy subscale (i.e., Global, Problem-Solving and Support Strategies), the scores for the respective subscales will be added up and divided by the number of items under each subscale. The average for each subscale in the questionnaire represented the mean frequency with which learners used a given subscale of strategies when reading academic materials. According to Mokhtari and Sheorey (2002), there are three levels of reading strategy usage that can be identified: high (average score of 3.5 or higher), moderate (average score of 2.5 to 3.49) and low (average score of 2.49 or lower). This scale was used to interpret the data obtained and hence, identify the learners' reading strategy usage level.

Questionnaire gives advantage in terms of data collection administration. It would be easier to administer data collection via questionnaire since the participants need only provide information that is pertinent to the scope of the investigation. In addition, the process of analyzing the data is less complex since respondents have been given a clear set of choice to choose from.

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3.4.2 Reading text and Reading Comprehension Test

i. Reading Text

As for this study, two sets of reading text were selected. The texts chosen were chapters taken from a text book used in Principal of Economic subject (P1106) namely "Introduction to Economics" (Appendix D) and "Theories of Demand Supply" (Appendix E). The texts from this subject were selected because both intact classes were enrolled to Principal of Economic as compulsory subject. Another reason why the texts were selected is because the pre-test and post-test are constructed based on the content of Principal of Economic course. Further this course also requires the students to do a lot of reading in order to understand the content. Introduction to Economic was used during pre and post reading comprehension test while Theories of Demand Supply was used during the training.

ii. Reading Comprehension Test

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Two sets of reading comprehension test (pre-test and post-test) (Appendix B and C) were developed based on the Principle of Economics course content. The tests questions were selected from the Principle of Economic textbook by Deviga and Karunagaran (2007). There were 20 objective questions selected pertinent to one of the topic in the textbook which was Introduction to Microeconomic. There were four answer options namely A, B, C and D. Each correct option has an equal frequency. Both pre-test and post-test consist of similar questions however the arrangement of questions were different. The subjects were provided with a reading text (Appendix D) during the test. The questions for post-test were rearranged in order to minimize the probability of pre-test effect. In order to ensure the validity of the pre-test and the post-test, all of the questions are selected from the textbook. Therefore the content of the questions were relevant to the subject discussed throughout the training. The subjects were provided with the text when they were answering the pre and post test.

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3.5 Reading Strategy Instruction

As the treatment for the experiment group, the class was given 60 minutes of reading strategies instruction for 12 weeks. The instruction was divided into four different phases. The following table illustrates the phase duration and content for the training.

Table 3.5.1
Training Phase and Content

Phase	Week	Content
Phase 1	**1-3**	**Global Reading Strategies (GLOB).** ▪ Read with a purpose in mind ▪ Think about what I know to help me understand what I read (pre-information) ▪ Over all view of the text to see what it's about before reading ▪ Decide whether the content of the text fits the reading purpose ▪ Review the text first by noting characteristics including length and organization ▪ Decide what to read closely and what to ignore. ▪ Use tables, figures, and pictures in the text to increase understanding ▪ Use context clues to help better understand the reading ▪ Use typographical features like bold face and italics to identify key features ▪ Critically analyze and evaluate the information presented in the text ▪ Check understanding when coming across new information ▪ Guess what the content of the text is about when reading ▪ Check to see if guesses about the text are correct
Phase 2	**4-6**	**Problem Solving Strategies (PROB)** ▪ Read slowly and carefully to make sure I understand what I'm reading ▪ Try to get back on track when distracted or lose concentration ▪ Adjust reading speed according to the reading material ▪ When text becomes difficult, pay closer attention to the material

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Phase	Week	Content
		▪ Stop from time to time and think about the reading ▪ Try to picture or visualize information to assist in remembering ▪ When text becomes difficult, re-read to increase understanding ▪ When reading, guess the meaning of unknown words or phrases.
Phase 3	**7-9**	**Support Strategies (SUP)** ▪ Take notes while reading to assist in understanding the text ▪ When text becomes difficult, read aloud to assist in understanding ▪ Underline or mark-up information in the text to assist in remembering ▪ Use reference materials (dictionaries, etc.) ▪ Paraphrase/restate to better understand ▪ Go back and forth in the text to find relationships among ideas ▪ Ask self questions to find answers in the text
Phase 4	**10-12**	**Reviewing the three strategies and reading practice**

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Throughout the 12 weeks training the subjects were exposed to strategies which outlined by Mokhtari and Sheorey (2002). The strategies were integrated with the content (Principle of Economic) so that the subjects were able to relate with the training environment. As a consequence the subjects were able to assimilate the strategies as they practice them in meaningful context.

The training conducted according to the framework outline by Winograd and Hare (1988) as explained in chapter 1. The procedure of training was as follows:

Table 3.5.2
Training Procedure

Steps	Elements	Activity	Materials
1	1. What the strategy is? Teacher define and explain the features of the strategies.	▪ Lecture (Appendix F) ▪ Classroom Discussion	Handout (Appendix G)

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Steps	Elements	Activity	Materials
2	2. Why a strategy should be learned?Teacher explain the purposes, importance and benefit of the strategies.	▪ Lecture ▪ Classroom discussion	Handout
3	3. How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	▪ Teacher modeling ▪ Read-aloud ▪ Student practice	Handout
4.	4. When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances.	▪ Lecture ▪ Classroom discussion	-
5.	5. How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	▪ Classroom discussion ▪ Students practice	-

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Throughout the first three phases of training, the teacher used the above procedure. As for the last phase, the subjects worked in small group to review and practice the strategies that they have learnt during the training with the supervision of the teacher. In order to balance the role of teacher and students (subject), the training activities were involved lecture, teacher modelling, read-aloud and classroom discussion.

3.6 Research Procedure

In order to obtain the data, the treatment group and the control group was be given a pre-test consist of a reading comprehension test. The score from the pre-test then analyzed. After both group completed the reading comprehension pre-test, the classes

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were required to complete the survey of reading strategies (SORS) in order to assess the students' level of awareness at the beginning of the experiment.

In the next stage, the experimental group had undergone 12 weeks reading strategies training. After the experimental group completed their training both groups were required seat a post-test. The purpose of administering the post-test is to assess the score obtain by experimental group after they had undergone the training. The data obtained from both test provided the evidence of the effect of training given. Both groups also required to complete the survey of reading strategies (SORS) in order to assess the students' level of awareness after the experiment was completed.

Data from the pre-test and post-test as well as the survey of reading strategies (SORS) were processed and analyzed using SPSS (Statistical Package for the Social Science).

3.7 Data Analysis Method

The data obtained analyzed and interpreted in quantitative manner. The reading comprehension test and survey of reading strategies (SORS) score were analyzed via SPSS version 17 and the statistical figure obtained from control group and treatment group were compared. Paired t-test was used in order to analyze the score from both instruments. As explained in the design of study, the experiment was conducted to random assigned groups. Therefore paired t-test is appropriate to be used so that any difference in response due to the treatment can be observed. The paired t-test assessed whether the means of two groups are statistically different from each other. As a result it provides the evidence whether there is a significant difference between the means of two groups.

After the t-test conducted the researcher able to obtain the mean, standard deviation and the two-tailed P value of the data. The mean indicates the central tendency for a particular set of data and standard deviation describes the variability of the data about the mean. In other words standard deviation illustrates the probability of the score distribution from the mean of data. Meanwhile and the two-tailed P value indicate the statistical significant of the data analyzed.

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3.8 Reliability and Validity of the Research

A reliable test is consistent and dependable (Brown, 2001). It is important to ensure the reliability of the instrument since it is capable of cause inaccuracy in the data obtained. In terms of reliability, the instruments used most are capable of gathering the data according to the objectives of the research.

The validity of the study was determined by the reading strategies questionnaire and reading texts implemented. The two instruments were used in order to obtain evidence in responding to the investigation hypotheses. Therefore it was crucial to ensure that both instruments were reliable to measure what it is suppose to measure. Basically the questionnaire used for the purpose of data collection was adopted based on instrument developed by Mokhtari and Sheorey. The questionnaire, Survey of Reading Strategies (SORS) is developed to measure adolescent and adult ESL students' metacognitive awareness and perceived use of reading strategies while reading academic materials such as textbook (Mokhtari and Sheorey, 2000).

As for the reading comprehension test, the questions were selected from the content textbook. Therefore the content of the questions items were valid to assess the subjects understanding towards the test content.

In conclusion the instruments were capable to measure what they are supposed to measure. The instruments selected were able to gain the intended data which can provide the evidences to answer the hypotheses outlined in this experiment.

3.9 Conclusion

This chapter outlined the process and procedure of collecting the data. As a conclusion, this chapter has provided an insight into not only the data collection method for the current research but it also outlined the proposal for the data analysis procedure of the study.

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CHAPTER 4

FINDINGS AND DISCUSSIONS

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4.0 Introduction

This chapter discussed the data analysis and findings of this study. The data provide statistical evidence on students' reading comprehension performance and students' awareness level on reading strategies that answer the research questions.

4.1 Findings

The experimental data were subjected to paired t-test in order to test the two research questions of the present study: 1) to what extend the reading comprehension score improved after the students are introduced to reading strategies training? 2) To what extend the level of awareness towards reading strategies improved after the students were introduced to reading strategies training? The scores of reading comprehension test as Survey of Reading Strategies (SORS) were analysed in order to verify that

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there was a changes occurred after the treatment was implemented to the treatment group. The means between pre-test and post-test were examined.

4.1.1 Reading Comprehension Score

Reading Comprehension Test was used in order to provide evidence that answer the first research question; which is to what extend the reading comprehension score improved after the students are introduced to reading strategies training? The pre-test and post-test was administrated in order to observe participants' performance as well as to check the improvement in terms of understanding towards the topic after the experimental group has undergone the treatment. There were 20 reading comprehension and the total score awarded was 20. The same test was used to the control group as a means of comparison.

The score of the pre and post reading comprehension test were analyzed statistically by using paired-t test. The analyses of score for control group were presented in the following tables.

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Table 4. 1

Reading Comprehension Score for Control Group

Subject	Pre-Test	Post-Test	Margin of Difference
1 .DAT 1 2001	12	15	3
2 .DAT 1 2002	5	9	4
3 .DAT 1 2003	10	9	-1
4 .DAT 1 2004	5	8	3
5 .DAT 1 2005	5	9	4
6 .DAT 1 2006	7	11	4
7 .DAT 1 2007	10	12	2
8 .DAT 1 2008	10	14	4
9. DAT 1 2009	10	13	3
10 .DAT 1 2010	10	10	0
11. DAT 1 2011	11	12	1
12. DAT 1 2012	8	12	4
13 .DAT 1 2013	10	12	2
14 .DAT 1 2014	9	9	0
15 .DAT 1 2015	7	9	2

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Table 4.1 illustrates the experimental group's reading comprehension test score. According to the data the highest score for the pre-test was 11 while the lowest score was 5. As for the post-test, the data showed that the highest score was 15 meanwhile the lowest score was 9. Therefore it can be claimed that the control group managed to show an improvement in their reading comprehension score.

Table 4.2

Paired Samples Statistics for Control Group

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreT	8.6000	15	2.29285	.59201
	PostT	10.9333	15	2.12020	.54743

Table 4.2 shows the means obtained from the score. The score from pre- test generated 8.6 of mean whereas the post-test showed an increase figure of mean which is 10.9. The margin of improvement was 2.3. Standard deviation for pre-test was 2.29 while the standard deviation for post-test was 2.12. This figure indicated that the reading comprehension pre-test score disperse in a larger range compared to the reading comprehension post-test score. Thus it can be concluded that score for the post-test was more consistent compared to the pre-test.

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Table 4.3

Paired Samples Test for Control Group

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	PreT - PostT	2.33333	1.67616	.43278	-3.26156	-1.40510	-5.391	14	.000

Table 4.3 presents the test for the equality of means had a 2-tail significance of 0.00. Thus the two-tail p-value is <0.05. This value indicated that there was a significance difference between the pre-test and post-test score for control group.

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Table 4.4

Reading Comprehension Score for Experimental Group

Subject	Pre-Test	Post-Test	Margin of Difference
1. DPR2001	5	9	4
2 .DPR2002	12	11	-1
3 .DPR2003	7	14	7
4 .DPR2004	13	17	5
5 .DPR2005	8	13	5
6 .DPR2006	5	11	6
7 .DPR2007	7	12	5
8 .DPR2008	8	12	4
9 .DPR2009	7	13	6
10. DPR2010	8	14	6
11 .DPR2011	7	14	7
12 .DPR2012	8	11	3
13 .DPR2013	11	14	3
14 .DPR2014	9	16	7
15 .DPR2015	9	16	7

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Table 4.4 presents the reading comprehension test score obtained by the experimental group. The pre-test indicated that the maximum score was 13 meanwhile the minimum score was 5. On the other hand, the post test score point out that the maximum score was 17 whereas the minimum score was 9.

Table 4.5

Paired Samples Statistics for Experimental Group

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreTT	8.2667	15	2.28244	.58932
	PostTT	13.1333	15	2.19957	.56793

Table 4.5 presents the mean computed for the reading comprehension pre-test and post-test score. The mean for the pre-test was 8.27 while the mean for the post-test was 13.13. The margin of difference between the mean for the pre-test and post-test was 4.87. As for the standard deviation, the figure obtained for pre-test was 2.28 and the figure for post-test was 2.20. In comparison, it can be sum up that scores obtained by the subjects for the post-test was dispersed closer to the mean compared to the pre-test score.

Table 4.6:

Paired Samples Test for Experimental Group

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed
Pair 1	PreTT - PostTT	-4.86667	2.16685	.55948	-6.06663	-3.66671	-8.699	14	.000

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Table 4.6 illustrates the test for the equality of means had a 2-tail significance of 0.00. The paired t-test analysis showed that there was significant difference between means for the pre test and post test with the 2-tailed p-value was < 0.05.

4.1.2 Survey on Reading Strategy (SORS)

Survey on Reading Strategies (SORS) was administrated in order to examine the level of awareness posses by experimental group after the reading strategies training was conducted. There were three levels of reading strategy usage that can be identified: high (average score of 3.5 or higher), moderate (average score of 2.5 to 3.49) and low (average score of 2.49 or lower). The same survey was conducted to control group as a comparison parameter. The scores obtained were analyzed in order to gauge the value of mean and significant difference of means.

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The following tables present result of SORS score analysis for the control group.

Table 4.7

Survey on Reading Strategies Score for Control group

Participant	Pre-SORS	Post-SORS	Level of Strategies Usage during Pre-SORS	Level of Strategies Usage during Post-SORS
1 .DAT 1 2001	3.1	4.5	moderate	high
2 .DAT 1 2002	3.1	2.3	moderate	low
3 .DAT 1 2003	3.8	3.8	high	high
4 .DAT 1 2004	4.1	3.5	high	high
5 .DAT 1 2005	3.1	3.3	moderate	moderate
6 .DAT 1 2006	3.7	3.7	high	high
7 .DAT 1 2007	3.8	3.2	high	moderate
8 .DAT 1 2008	3.2	3.6	moderate	high
9. DAT 1 2009	3.2	4.3	moderate	high
10 .DAT 1 2010	3.0	4.2	moderate	high
11. DAT 1 2011	3.7	3.3	high	moderate
12. DAT 1 2012	3.3	4.0	moderate	high
13 .DAT 1 2013	4.1	3.5	high	high
14 .DAT 1 2014	4.1	3.4	high	moderate
15 .DAT 1 2015	4.1	3.2	high	moderate

This data indicates the level of strategies usage among control group subject at the beginning and at the end of the study. Both survey indicated a mix level of reading strategies usage. In pre-SORS, the control showed that the level of usage was moderate and high while for post-SORS the level of usage was low, moderate and high. The lowest level of usage during pre-SORS was 3.1 while the highest was 4.1. On the other hand, the lowest level of usage for post-SORS was 2.3 whereas the highest level of usage was 4.5.

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Table 4.8
Paired Samples Statistics for Control Group

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreS	3.5600	15	.43061	.11118
	PostS	3.5867	15	.54231	.14002

Table 4.9

Paired Samples Test for Control Group

	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1 Pre SORS – Post SORS	-.02667	.77779	.20082	-.45739	.40406	-.133	14	.896

Table 4.8 and table 4.9 summarize the statistical data for pre-SORS and post-SORS for the control group. The mean for the pre SORS is 3.56 meanwhile the mean for post SORS was 3.59. The margin of difference between both scores was -.027. This figure showed that there was a slight decline in term of level of strategies usage. The standard deviation for pre-SORS was .43 while the standard deviation for post-SORS was 0.54. Another important figure to highlight was the paired t-test result. The data indicated that the significant difference of means was 0.89. The 2-tailed p-value was > 0.05. Therefore there was no significant difference of means between the pre SORS and post SORS.

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The following tables present the result of the statistical analysis conducted.

Table 4.10

Survey on Reading Strategies Score for Experimental Group

Participant	Pre-SORS Score	Post-SORS Score	Level of Strategies Usage during Pre-SORS	Level of Strategies Usage during Post-SORS
1. DPR2001	3.6	4.6	high	high
2 .DPR2002	3.7	4	high	high
3 .DPR2003	3.5	3.9	high	high
4 .DPR2004	3.2	3.1	moderate	moderate
5 .DPR2005	3.1	3.5	moderate	high
6 .DPR2006	3.6	3.9	high	high
7 .DPR2007	3.4	3.6	high	high
8 .DPR2008	4.1	4.7	high	high
9 .DPR2009	3.8	3.6	high	high
10. DPR2010	3.9	3.9	high	high
11 .DPR2011	3.1	3.8	moderate	high
12 .DPR2012	4.2	4.2	high	high
13 .DPR2013	3.3	3.8	moderate	high
14 .DPR2014	3.1	3.3	moderate	moderate
15 .DPR2015	3.3	3.5	moderate	high

This data indicated the level of strategies usage among control group subject at the beginning and at the end of the study. Both survey indicated a mix level of reading strategies usage. The experimental group demonstrated that the level of usage was moderate and high while for both pre-SORS and post-SORS. The lowest level of usage during pre-SORS was 3.1 while the highest was 4.2. On the other hand, the lowest level of usage for post-SORS was 3.1 whereas the highest level of usage was 4.7. Overall there was an improvement in terms of level of reading strategies usage among the experimental group subjects.

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Table 4.11
Paired Samples Statistics for Experimental Group

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreSS	3.5267	15	.35950	.09282
	PostSS	3.8267	15	.43665	.11274

Table 4.12
Paired Samples Test for Experimental Group

	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed
Pair 1 Pre SORS – Post SORS	-.30000	.31848	.08223	-.47637	-.12363	-3.648	14	.003

Table 4.11 and 4.12 illustrate the statistical data for both pre-test and post-test. The figure indicated the value of mean of pre-test was 3.53 and the value of post-test was 3.84. The margin of difference between both tests was –0.3. The standard deviation for pre-SORS was 0.36 whereas the standard deviation for post-SORS was 0.44. Furthermore, the result of the 2-tailed p-value was < 0.03. This indicated that there was a moderate significant difference of means between the pre test and post test since the 2-tailed p-value was > 0.05.

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4.2 Discussions

4.2.1 Reading Comprehension Score Analysis

In order to seek for evidence to answer the first research question the mean of the score for both pre test and post test was compared. Other than that the significant difference of mean also has been examined. Based on the paired t-test analysis the figure indicated that both experimental and control showed that the value for 2-tailed p-value was > 0.00. This was due to score for both groups increase significantly after the pre test and post test were analyzed.

On the other hand a comparison between the mean of pre test and post test for both groups reveal that score for experimental group was higher from the control group. The mean of score for pre test obtained by experimental group was 8.27 meanwhile control group managed to obtain 8.60. These figures showed that experimental group obtained a lower score compared to control group. However, after they had undergone the reading strategies training session and then the post test was administrated, experimental group managed to obtained higher score compared to control group that perform better during the pre test. The difference between margin of means for pre test and post test of comprehension test for both groups was 2.53. This evidence proved that the strategies training conducted manage to bring a positive impact towards the subjects' comprehension performance. Therefore, it can be inferred that the subject were able to utilize the reading strategies introduced effectively while they were completing the test administrated.

This finding was concrete to answer the first research question which query to what extend the reading comprehension score improved after the students are introduced to reading strategies training. The result showed a fair comparison between reading comprehension performance of experimental and control group. To sum up reading strategies training was practical to facilitate the subjects in transforming themselves to be a strategic reader as well as to perform better in their academic activities.

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4.2.2 Survey on Reading Strategy Score Analysis (SORS)

The purpose of administrating SORS to the subjects was to obtain the evidence in order to answer the second research question. The survey consist of self-reported items that scored by the subjects in order to identify their level of awareness in utilizing reading strategies while they were reading academic texts. The analysis conducted based on the subjects' score provide the evidence that illustrate the subjects' improvement which regard to level of awareness.

The analysis showed level of awareness possessed by experimental group subjects increased significantly compared to control group. The paired t-test analysis for experimental group indicated that the value for 2-tailed p-value was > 0.03. On the other hand, the same data analysis conducted to control group's SORS score indicated that the value for 2-tailed p-value was > .89. Obviously there was no significant difference of means between the pre SORS and post SORS for the control group. It can be concluded that experimental group's subjects were able to assimilate the strategies introduced to them. The subjects' awareness towards reading strategies turn to be an effective tool for them in completing the reading comprehension post test after the training was given.

At the beginning the investigation the mean of score of SORS was 3.53 for experimental group meanwhile 3.56 was obtained by control group. These figures indicated that both groups possess almost the same level of awareness before the training session begun. After the reading strategies training conducted to the experimental group another SORS was administrated to both groups in order to examine the changes. The analysis conducted indicated that the mean of score obtained by the experimental group was increased. This evidence showed that the subjects were able to grasp input given during the training and further practice of the strategies in their reading activities. As for the control group, the analysis showed a negative change whereby the mean of score for SORS was decreased. Therefore, it can be inferred that the decreasing of reading strategies awareness might occurred due to unconsciousness towards the importance of reading strategies in learning process.

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The survey (SOSR) administrated provides the researcher with a reliable instruments that make able for this study to assess level of reading strategies awareness possess by the subjects. The survey was also a part of the strategies training framework stage whereby an evaluation must be conducted in order to examine the progress of the subjects who received the training. Other than that, the survey also benefited the subjects since it was a simple tool that helps them to evaluate their level of awareness independently. As for the experimental group subjects, the survey not only reveals their level of awareness, it also helps them to monitor their progress after the training completed. This process gave the subjects the sense of authority and autonomy in their learning process.

4.3 Conclusion

Basically, the evidence generated from the instruments used in this study namely reading comprehension test and survey on reading strategy (SORS) provide an interconnected conclusion. The reading strategies showed that group which received reading strategies training performed better in their reading comprehension test as well as their performance in SORS. Based on the evidence it can be inferred that experimental group positive achievement in reading comprehension test might be the positive effect of the strategies training that they had gone through for 12 weeks. The increasing of level of awareness as obtained by SORS indicated that the experimental group able absorbed the input given during the training session and further practice and manipulates it in their reading activities. As the consequence, the experimental group demonstrated an encouraging performance by scoring better in the post reading comprehension test administrated. In general, the finding generated from this experiment was complied with previous researches that study on the effect of reading strategies such as studies conducted by previous researchers such as Majid (2005) , Tan and Philip (2006) and Handyside (2007). Based on the findings generated from the present and previous studies it can be

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claimed that reading strategy training can be an effective approach in facilitating language learners in developing their reading proficiency.

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CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

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5.1 Introduction

This chapter presented the conclusion of the current study. In addition, this final chapter also outlined the limitation of the study. This chapter also provided pedagogical implications and suggestions for further research.

5.2 Conclusions

This study examined the effects of reading strategy training on students' comprehension performance and their awareness towards reading strategies. Subjects were divided into two groups; the experimental group and the control group. Subjects in the experimental group received the strategy training. This study was conducted over 12 weeks.

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The results of the current study indicated that the reading strategy training which the subjects have exposed to do affected their use of reading strategies while reading academic text. The experimental group showed a better performance in terms of reading comprehension score and on the other hand the awareness towards reading strategies also increased. This indicates that there is connection between reading strategies awareness and reading comprehension performance. Fauziah Hassan (2003) concluded the investigation conducted by Barnett (1988) that the findings seemed to indicate that there was a linear relationship between strategy use and reading comprehension. Therefore the findings were concurred with the previous study.

Based on the findings it can be concluded that reading strategies training can be the strategies used vary according to individuals. However, a notion can be generated from the findings which are, high proficiency learners tend to utilize a wide range of strategies with high level of reading processing compared to low proficiency group. The findings indicated that high proficiency learners managed to utilize the strategies effectively since they manage to obtain better score compared to the low proficiency group. As for the low proficiency group, their weak point is in terms of turning the reading strategies into an advantage to read successfully. Basically, this group of language learners utilized lesser reading strategies and they probably utilized a low level of reading strategies processing. It is also important to note that a wide range of strategies utilization will not ensure better comprehension if the reader not able to manipulate, integrate and flexibly choose the strategies while reading. This can be seen in several participants' performance whereby although they have utilized a wide range of reading strategies, it did not help them to comprehend the text better.

In short, the importance of reading strategies needs to be further investigated so that it will provide more insights which can assist the language learner to acquire and learn how to read efficiently therefore they can perform real life task efficiently. For instance, as tertiary level students they will encounter many tasks which will require them to extract information from written sources. Therefore, the exposure towards reading strategies training will be beneficial in order to develop a competent reader.

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5.3 Pedagogical Implications

The main concern of this research is to elicit the qualities of reading strategies utilized by high proficiency group and low proficiency group so that it can provide a valuable insight for language teachers or trainers and language learners. As a result, the findings can help and assist people involved in the language teaching and learning process especially in reading skills. Basically, the implication for classroom practice can be divided into two components. Firstly, language learners are the main focus in the study. Based on the findings, the researcher suggests that language learners should pay attention on reading strategies since the demand towards reading is vital at tertiary level. This group of students frequently encounters different kinds of text with different difficulties level. Therefore, it is important to have the necessary reading strategies to facilitate the comprehension process. As for students, they need to be aware how to utilize the reading strategies effectively. They should view reading strategies as an advantage in acquiring knowledge and further to be excellent in academic.

Secondly, the findings provide valuable information for teachers as the study shows that it is important for the reader to utilize the strategies effectively. To certain extend the utilization of a wide range of strategies deed not necessarily result in better comprehension. What important here is to provide students with the skills of how to utilize the strategies successfully in order to maximize their comprehension. Ismail Sheikh Ahmad and Ratnawati Mohd Asraf (2004) mentioned less proficient second language students need an adequate assistance from teachers to help them to evaluate, regulate and compensate their answering strategies in reading comprehension tasks. Here, teachers need to pay attention towards the exposure that students need in order to read effectively before they are able to make use of the strategies independently. To familiarize the students with the strategies the teacher can introduce reading activities which provides the students with opportunities to practice the reading strategies. The teacher can also prepare instructional materials which expand the opportunities for students to discover and practice utilizing various reading strategies. A well-design training programme will enable the learners to maximize their capability in reading.

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5.4 Suggestion for Further Research

There are many variables which influence reading strategies. As for the current research the focus is on the proficiency level of students or participants. Many issues which still in question and needs to be answered so that the educationist will be able to improve their reading instruction. The findings showed that there are a few participants who utilized many strategies but they did not able to perform well in the reading comprehension tasks. This scenario needs to be investigated in order to identify the problems which cause ineffective used of strategies.

Due to the time constrain, the researcher has selected questionnaire and reading comprehension task as the means of data collecting method. The research design can be improved by utilizing multiple-data-collecting devices. Therefore, the findings can be verified and interpreted accordingly.

Another important issues which worth to be investigated is the correlations between variables which influence the choice of strategies used. For instance, the future research can look into the relationship between prior knowledge, language repertoire and the choice of strategies.

The future research also can explore the reading strategies utilized by other group of language learner such as primary and secondary students. This kind of investigation will provided beneficial information on reading strategies utilized by adolescent language learner. Thus, this will help the language teacher and trainer to diagnose the strength and weaknesses of this group of learners. Consequently, the teacher and trainer can assist the learners in strengthen and enhance their reading capability.

Finally, future study can also look at on-line or web-site reading. In new age technology, on-line and web-site reading is getting prominent due to easy access material provided by these new platform. Therefore it will be beneficial to look at how students read and what are the strategies needed in order to deal with such a text.

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5.5 Closing Remark

Understanding reading habit and practice among language learners are always essential in education. The undeniable importance always keeps the researchers and scholars to unveil more about this complex process. Observing the reading process, understanding the breakdown during the process and solving problems related to reading process will always be beneficial for language teacher and students. Thus, developing reading strategy training should be considered as the central goal of any formal language instruction programme especially at tertiary level of education. The findings from this study suggested that reading strategy training did help students to improve their reading comprehension level as well as it increase students' awareness in their reading process. Therefore, strategy training seems to be effective and worthy for further exploration in higher education setting. The authority who involved in designing the language learning curriculum should take into account the potential of reading strategy training in improving language proficiency among Malaysian students.

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APPENDIX A

Survey of Reading Strategies

ar student,

e purposes of this survey is to collect information about the various techniques you use when you read ademic materials in English (e.g. reading textbooks for homework or examination, reading journals article .)

nder:

e:

gramme:

M result:

9 result:

the items below refer to your reading of **college-related academic materials** (such as textbooks). Each ement is followed by five numbers 1,2,3,4 and 5, and each number means the following:

neans that '**I never or almost never do this**'.
neans that 'I do this **only occasionally**'.
neans that '**I sometimes** do this'. (About 50% of the time.)
neans that '**I usually** do this.
neans that '**I always or almost always** do this'.

er reading each statement, circle the number (1, 2, 3, 4 or 5) which applies to you. Note that there are no t or wrong responses to any of the items on this survey.

ement		Never				Always
1.	I have purposes in my mind when i read.	1	2	3	4	5
2.	I take notes while reading to help me understand what I read.	1	2	3	4	5
3.	I think about what I know to help me understand what I read.	1	2	3	4	5
4.	I take an overall view of the text to see what it is about before reading it.	1	2	3	4	5
5.	When the text become difficult, I read aloud to help me understand what I read.	1	2	3	4	5
6.	I think about whether the content of the text fits my reading purposes.	1	2	3	4	5
7.	I read slowly and carefully to make sure I understand what I am reading.	1	2	3	4	5
8.	I review the text first by noting its characteristics like length and organization.	1	2	3	4	5

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9. I try to get back on track when I lose concentration.	1	2	3	4	5
10. I underline or circle information in the text to help me remember it.	1	2	3	4	5
11. I adjust my reading speed according to what I am reading.	1	2	3	4	5
12. When reading, I decide what to read closely and what to ignore.	1	2	3	4	5
13. I use reference materials (e.g. dictionary) to help me Understand what I read.	1	2	3	4	5
14. When text becomes difficult, I pay closer attention to what I am reading.	1	2	3	4	5
15. I use tables, figures, and pictures in text to increase my understanding.	1	2	3	4	5
16. I stop from time to time and think about what I am reading.	1	2	3	4	5
17. I use context cues to help me better understand what I am reading.	1	2	3	4	5
18. I paraphrase (restate ideas in my own words) to better understand what I read.	1	2	3	4	5
19. I try to picture or visualize information to help remember what I read.	1	2	3	4	5
20. I use typographical features like bold face and italics to identify key information.	1	2	3	4	5
21. I critically analyze and evaluate the information presented in the text.	1	2	3	4	5
22. I go back and forth in the text to find relationship among ideas in it.	1	2	3	4	5
23. I check my understanding when I come across new information.	1	2	3	4	5
24. I try to guess what the content of the text I about when I read.	1	2	3	4	5
25. When text become difficult, I re-read it to increase my understanding.	1	2	3	4	5
26. I ask myself questions I like to have answered in the text.	1	2	3	4	5
27. I check to see if my guesses about the text are right or wrong.	1	2	3	4	5
28. When I read, I guess the meaning of unknown words or phrases.	1	2	3	4	5
29. When reading, I translate from English into my native language.	1	2	3	4	5
30. When reading, I think about information in both English and my mother tongue.	1	2	3	4	5

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APPENDIX B

Principles of Economic

Pre-test

x Number: _____

are 20 multiple- choice questions. Answer all questions.

The basic economic problems are
what to produce and why.
which and when to produce.
what to produce, how much and for whom.
what is the purpose of producing and for whom.

Which of the following would be studied in microeconomic?
The output of the entire economy.
The output and price of meat in Malaysia.
The general level of prices in the Malaysian Economy.
The total number of workers employed in a country.

In a planned economy, the economic problems are solved by
. the price mechanism.
. the actions of producers.
. the command of ruling party.
. the pattern of consumer expenditure.

The following are advantages of a socialist economy except
it ensures stable prices
it promotes social justice.
it ensures full employment.
it ensures efficiency in the use of resources.

A pure capitalistic system is best characterized by
the production of large quantities of capital goods.
the absence of government intervention economic activity.
the interaction of private markets and government regulations.
the existence markets for the trading of stocks, bonds, and other financial capital.

An important difference between a pure market economy and a planned economy is
the quality of goods produced.
the reduction of profits to normal.
the rate of underemployment of a labour.
the extent of government intervention in the economy.

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In order to produce in economically efficient way, an economy will
use limited resources to try to satisfy its income.
conserve its irreplaceable natural resources
achieve an equitable distribution of national income.
obtain maximum possible output from its limited resources.

A movement along the production possibilities curve implies that
GNP has increased.
productivity has decreased.
more resources are now available.
society has chosen to produce a different combination of goods.

The production possibility frontier bows outward because
opportunity cost increases as the production of goods increases.
opportunity costs are fixed as the production of goods increases.
opportunity cost decreases as the production of goods increases.
opportunity cost are fixed as the production of goods decrease.

Which of the following will cause the economy's production possibilities frontier to shift outward?
A decline in the country's population.
An increase in technological know-how.
A reduction in the unemployment rate for labour.
A change in the combination of commodities produced.

Along a given production possibilities curve involving two goods, producing more of one goods requires that
a better technology be employed.
less of the other type of goods be produced.
more other type of goods n\be produced.
the production of other of goods be held constant.

Which of the following **does not** illustrate opportunity cost?
If I spent more on clothes, I must spend less on food.
If I study today, I must give up going to the football game.
If I buy a computer, I must give up going to the football game.
An increased consumer spending now means more spending in the future.

Opportunity cost is
the change in a firm's total costs when output is increased by one unit.
the change in profits when production of a good is increased by one unit.
the cost of a type of goods measured in terms of the money , which must be paid to obtained it.
the cost of a type of goods which measured in terms of the other goods which must be foregone in order to obtain it

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. Private ownership of resources and the use of a price mechanism to solve basic economic problems are the aracteristic of _____.

Capitalism
Socialism
Mixed Economy
The Command Economy.

. The economic problem of scarcity refers to
limited wants and unlimited resources.
limited wants and unlimited resources.
limited resources and unlimited wants.
unlimited wants and unlimited resources.

. Macroeconomics is the study of economics from the view point of
the entire economy.
the individual.
government units.
individual firm.

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. All the following are basic economic questions except?
How to produce?
What to produce?
Where to produce?
For whom to produce?

. The statement that human being's want cannot be fully satisfied with limited resources is called
desire.
choices.
scarcity.
opportunity cost.

. Migration of workers to Country A is represented by
a linear production possibilities curve.
a movement along the production possibility curve.
an inward shift of the production possibility curve.
an outward shift of the production possibilities curve.

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"The use of computers in the banking system has replaced many workers." This statement is a problem of

What to produce?

How to produce?

Where to produce?

From whom to produce?

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APPENDIX C

Principles of Economic

Post-test

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are 20 multiple- choice questions. Answer all questions.

All the following are basic economic questions except?

How to produce?

What to produce?

Where to produce?

For whom to produce?

Which of the following would be studied in microeconomic?

The output of the entire economy.

The output and price of meat in Malaysia.

The general level of prices in the Malaysian Economy.

The total number of workers employed in a country.

The basic economic problems are

what to produce and why.

which and when to produce.

what to produce, how much and for whom.

what is the purpose of producing and for whom.

Macroeconomics is the study of economics from the view point of

individual firm.

the individual.

government units.

the entire economy.

In a planned economy, the economic problems are solved by

the price mechanism.

the actions of producers.

the command of ruling party.

the pattern of consumer expenditure.

The following are advantages of a socialist economy except

it ensures stable prices

it promotes social justice.

it ensures full employment.

it ensures efficiency in the use of resources.

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A pure capitalistic system is best characterized by
. the production of large quantities of capital goods.
. the absence of government intervention economic activity.
. the interaction of private markets and government regulations.
. the existence markets for the trading of stocks, bonds, and other financial capital.

In order to produce in economically efficient way, an economy will
. conserve its irreplaceable natural resources.
. achieve an equitable distribution of national income.
use limited resources to try to satisfy its income.
. obtain maximum possible output from its limited resources.

The production possibility frontier bows outward because
resources are of a uniform quality.
opportunity costs are fixed as the production of goods increases.
opportunity cost decreases as the production of goods increases.
opportunity cost increases as the production of goods increases.

. An important difference between a pure market economy and a planned economy is
the quality of goods produced.
the reduction of profits to normal.
the rate of underemployment of a labour.
the extent of government intervention in the economy.

..The economic problem of scarcity refers to
limited wants and unlimited resources.
unlimited wants and unlimited resources.
limited resources and unlimited wants.
limited wants and unlimited resources.

.A movement along the production possibilities curve implies that
GNP has increased.
productivity has decreased.
more resources are now available.
society has chosen to produce a different combination of goods.

Which of the following will cause the economy's production possibilities frontier to shift outward?
A decline in the country's population.
An increase in technological know-how.
A reduction in the unemployment rate for labour.
A change in the combination of commodities produced.

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4. Along a given production possibilities curve involving two goods, producing more of one goods requires that
. a better technology be employed.
. less of the other type of goods be produced.
. more other type of goods n\be produced.
. the production of other of goods be held constant.

5 .Which of the following does not illustrate opportunity cost?
. If I spent more on clothes, I must spend less on food.
. If I buy a computer, I must give up going to the football game.
. If I study today, I must give up going to the football game.
. An increased consumer spending now means more spending in the future.

6. Opportunity cost is
. the cost of a type of goods which measured in terms of the other goods which must be foregone in order to obtain it
. the change in profits when production of a good is increased by one unit.
. the cost of a type of goods measured in terms of the money , which must be paid to obtained it.
. the change in a firm's total costs when output is increased by one unit.

7. Private ownership of resources and the use of a price mechanism to solve basic economic problems are the aracteristic of _____.
. Capitalism
. Socialism
. Mixed Economy
. The Command Economy.

8.The statement that human being's want cannot be fully satisfied with limited resources is called
. opportunity cost.
. choices.
. scarcity.
. desire.

9. The use of computers in the banking system has replaced many workers." This statement is a problem of
. What to produce?
How to produce?
From whom to produce?
Where to produce?

.Migration of workers to Country A is represented by
a movement along the production possibility curve.
a linear production possibilities curve.
an inward shift of the production possibility curve.
an outward shift of the production possibilities curve.

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Appendix D

Reading Text 1

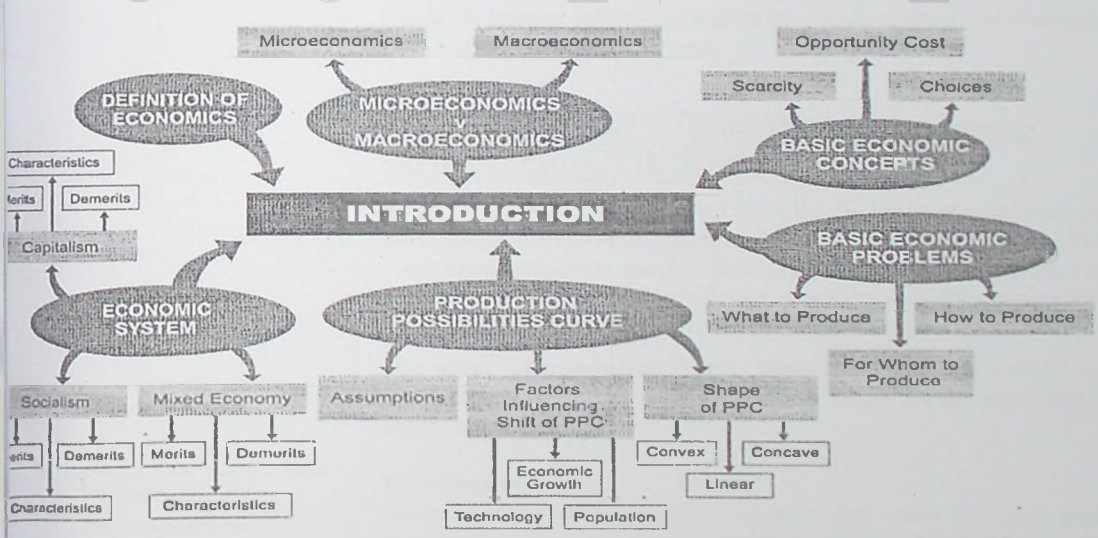
CHAPTER 1

INTRODUCTION TO MICROECONOMICS

Chapter Objectives

- To define economics and distinguish between microeconomics and macroeconomics
- To describe basic economic concepts: scarcity, choices and opportunity cost
- To explain the basic economic problems
- To use the production possibilities curve to explain the basic economic concepts
- To explain the three types of economic system

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Economic Activity
An activity that helps people make economic gains.

INTRODUCTION

Economics is one of the oldest disciplines among the humanities and is categorized as a social science. Economics examines and analyses the economic activity of people in order to satisfy their needs and desires. Human wants are the starting point of economic activity and provide the basis for economics. An economic activity refers to an activity that helps the people to achieve economic gains, which is valued in terms of money. Human beings have certain basic needs, for example, food, the need for shelter and clothing. But a human being is never satisfied and there will be no end to his wants. Do you have everything you want? Probably not, because one want will lead to another want and so on. So, economics deals with the economic problems of individuals, firms, societies and countries.

Economics
A study of how people use their limited resources to fulfil unlimited wants.

DEFINITION OF ECONOMICS

Basically, there are wide definitions of economics as a social science. Below are some such definitions.

Economics is a science that studies human behavior as a relationship between ends and scarce means which have alternative uses, according to L. Robbins.

K.E. Case and R.C. Fair are of the view that economics is a study of how people use their limited resources to try to fulfil unlimited wants and involves alternatives or choices.

David N. Hyman defined economics as a study of how scarce resources are allocated among alternative uses.

DIFFERENCES BETWEEN MICROECONOMICS AND MACROECONOMICS

After the great depression of the 1930s, the discipline of economics split into two, namely, microeconomics and macroeconomics. Ragnar Frisch, a Norwegian economist and Jan Tinbergen, a Dutch economist were the first to introduce the words micro-dynamics and macro-dynamics in 1933 and these were later known as microeconomics and macroeconomics.

The terms 'Microeconomics' and 'Macroeconomics' are derived from the Greek words 'micro' and 'macro', where 'micro' means small and 'macro' means large.

Microeconomics
Studies individual economic units.

Microeconomics

Microeconomics studies individual economic units in detail such as a household, a firm and a government. As the word 'micro' means looking closer into small units, microeconomics provides an outline for choices and decision making of an individual, a business and the public at large.

Microeconomic concepts can be applied to our daily lives. Individuals face questions like: What do I want for breakfast? Shall I buy a DVD player or a

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computer? Where should I go for holidays? Firms face questions like: Shall we produce rice or compact discs ? How many labourers should we employ? Shall we use more machines or labour? A government faces questions like: Shall we allocate a budget for schools or clinics?

Macroeconomics

Macroeconomics studies the aggregate behaviour of the entire economy. We study the gross domestic product, the national income, inflation, deflation, unemployment, public finance, the trade cycle, international trade and others.

Macroeconomics
Studies the aggregate behaviour of the entire economy.

Some examples are: What is the unemployment rate in Malaysia? What causes a high inflation? Why did Bank Negara Malaysia cut interest rates by 2%?

The difference between the two fields is as follows:

Microeconomics	Macroeconomics
The study of individual parts of the economy such as public choices, business choices and personal choices.	The study of the economic system as a whole such as the national income, the trade cycle, the unemployment rate, inflation and general price levels.

BASIC ECONOMIC CONCEPTS

Favourite question in essays.

Recall the definition by Robbins, 'Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses'. When we observe this, we shall find some important concepts which comprise the main structure of Economic Science.

The meaning of the three important fundamentals are as follows:

- ends refers to unlimited human wants. From our own experience, we want many things in life and if one want has been satisfied, it would create another need. For example, if we desire to buy a Kancil car and we manage to purchase one, later we would want a bigger, imported car and these wants will continue without an end. So, when there is unlimited wants, we would need to choose between the most urgent need and the less urgent want.
- scarce refers to the wants which are unlimited although the means to satisfy these wants are limited. In other words, there are limited resources. Almost all things that men desire or want are scarce.
- alternatives refers to choices which may be made and involves opportunity cost. Scarce resources can be put to various uses. If we are not able to buy an imported car, there are other alternative cars that we can purchase with our limited income.

Scarcity

One of the most important concepts in economics is scarcity. Scarcity can be explained as wants are always exceeding limited resources to satisfy them. Scarcity is a universal problem faced by both poor and rich nations in order to fulfil their needs. If there is no scarcity, there will be no economics. The

Scarcity
Wants always exceed limited resources to satisfy clients / society.

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more details in chap 5

needs or wants are unlimited but the world has only a limited amount of resources of factors of production. Factors of production are the basic resources used in the production process in order to produce economic goods and services. Economists have classified the factors of production into four groups namely:

1 Labour

The services contributed by people in the production process that involve both mental and physical effort. Examples are lecturers, construction workers and others.

2 Capital

Human made resources which are used in the production process to produce other goods and services. Examples are machinery, raw material, buildings, tools and others.

3 Land

All natural resources such as land, air, water, forest and others.

4 Entrepreneur

Human ability and capability to combine land, labour and capital to develop production of goods and services.

Choice

When there is scarcity, choices have to be made. Everyone cannot have what he or she wants, so they have to choose from the available alternatives. Individuals, firms and government make decisions to choose from many alternatives.

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Opportunity cost
Second best alternative that has to be forgone for another choice which gives more satisfaction.

Opportunity Cost

Opportunity cost is the cost of one choice in terms of the best forgone alternative. If you cannot obtain what you need, then you have to choose among the alternatives. The next alternative that you choose not to do is the cost of the thing that you choose to do.

Definition of opportunity cost

Opportunity cost is defined as the second best alternative that has to be forgone for another choice which gives more satisfaction.

Example

Dina has RM5 and she would like to buy two things: a book and a pen which cost RM5 each (unlimited wants but limited resources). Dina has to choose either to purchase a book or a pen which would satisfy her needs (choices). If Dina chooses the book, then the pen is the opportunity cost because it is the second best alternative which she has to forgo.

Basic Economic Problems
Choices made by any society to decide on what to produce, how to produce and for whom to produce.

BASIC ECONOMIC PROBLEMS

These can also be referred to as basic economic questions. Since there are limited resources, a nation or society has to decide how to allocate its limited

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resources efficiently to produce the goods and services to satisfy the needs of the people. To do this, three fundamental economic questions need to be answered.

1 What to Produce

The economy of every nation has to take a fundamental decision of what to produce because of the limited economic resources. Every society must choose the type and the quantity of goods and services that it will produce. Should more computers be produced than radios? Should more clinics be built than schools? How many cars should be produced? The problem of what to produce is solved in different ways in different economic systems. In a capitalist economy, this problem is solved through the price mechanism, which reflects consumers' taste and preferences. In a socialist system, it is solved by the Central Planning Authority.

2 How to Produce

This refers to the cheapest method of production. There are alternative techniques of producing goods and services. Should farmers use traditional ways to harvest? Should factories use more human power or robotics to produce goods? Should cars be produced by automatic machines or assembly line workers?

3 For Whom to Produce

This refers to distribution. Distribution of economic benefits depends on the distribution of income. How is the national income distributed? Who will drive the latest model of an imported car? How much will pensioners receive?

These three basic economic problems are solved differently in different economic systems. *See economic systems.*

PRODUCTION POSSIBILITIES CURVE (PPC)

Production possibilities curve
Various possible combinations of goods and services produced within a specified time with given technology and resources.

The production possibilities curve (PPC) is used to explain the basic economic concepts of scarcity, choices and opportunity cost.

The PPC shows the various possible combinations of goods and services produced within a specified time with all its resources (labour, land and capital) fully and efficiently employed. Let us make the following three specific assumptions to illustrate the PPC.

1 The economy is operating in full employment and full production capacity (full efficiency).

2 The amount of resources available is fixed.

3 The state of technology does not change throughout production.

Let us assume that a country named JAYA produces two products – butter and sewing machines. Butter is symbolic of consumer goods and sewing machines are symbolic of capital goods. The PPC can be illustrated by use of a table or graph.

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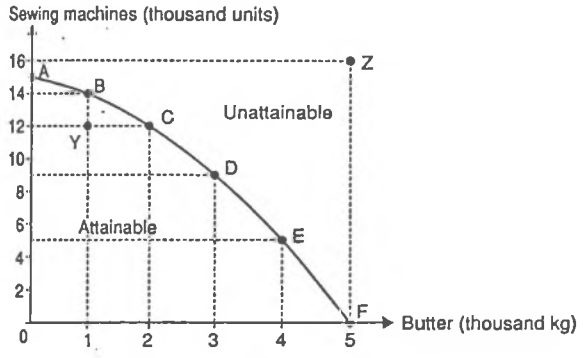


FIGURE 1.1 Production Possibilities Curve

TABLE 1.1 Various Combinations

Production Possibilities	Sewing Machine	Butter
A	15	0
B	14	1
C	12	2
D	9	3
E	5	4
F	0	5

The explanation for Figure 1.1 is as follows:

- The line connecting points A to F is JAYA's Production Possibilities Curve (PPC). It separates the attainable from the unattainable. Points A to F are the best possible combinations of resources to enable full utilization and to ensure that the country is at full employment. If all the factors of production are used in the production of butter only, JAYA's economy can produce 5,000 kg of butter. On the other hand, if the resources are used in the production of sewing machines only, then, 15,000 units of sewing machines can be produced. Besides these two extremes, the other combinations also show different possibilities. For example, Point C shows JAYA producing 2,000 kg of butter and 12,000 units of sewing machines while Point D shows 3,000 kg of butter and 9,000 units of sewing machines being produced.

- Any point inside the PPC (such as point Y)

  These combinations of production are attainable, that is, it is possible to produce butter and sewing machines of this quantity. But it shows waste of resources and inefficiency since the production has not reached its maximum level. For example, at point Y, only 12,000 units of sewing machines and 1,000 kg of butter are produced. Given the available resources, JAYA can produce 12,000 units of sewing machines and 2,000 kg of butter. This shows under production of 1,000 kg of butter if the combination of production was at point Y. This also leads to unemployment.

  Any point outside the PPC (such as point Z)

  This demonstrates the main basic economic concept: scarcity.
  At this point due to limited resources and technology, JAYA is unable to meet production. Points outside the PPC are unattainable. For

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example, at Point Z, JAYA wants to produce 16,000 units of sewing machines and 5,000 kg of butter, but due to limited resources and a limited state of technology, this cannot be achieved. When JAYA's wants exceed output, there is scarcity.

- Any point along the PPC (such as points A, B, C, D, E and F)

It shows the second concept: choices. JAYA will have to make its choices from various possible combinations of sewing machines and butter, which will maximize its satisfaction. Since JAYA cannot produce at point Z, it will choose any point along the PPC which is both attainable and efficient.

- Movement from one point to another (such as point C to D)

It shows the third concept: opportunity cost. JAYA must forgo sewing machines if it wants an additional 1,000 kg of butter. For example, JAYA needs more butter, so the production will move from point C to point D. In order to obtain additional 1,000 kg of butter, JAYA has to forgo 3,000 units of sewing machines. The opportunity cost of producing an additional 1 kg of butter is 3 units of sewing machines.

PPC enables us to calculate the opportunity cost as shown in Figure 1.2(a) and (b)

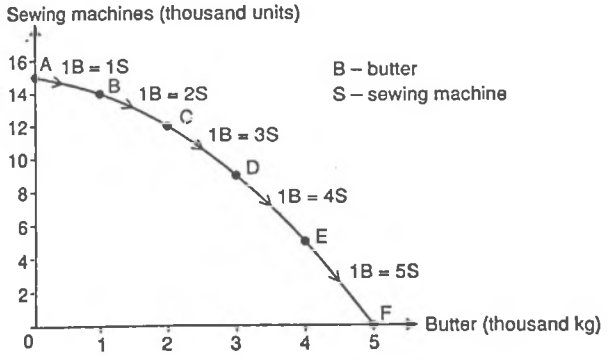


FIGURE 1.2(a) Calculating the Opportunity Cost of One Kg of Butter

The movement down from point A to point F on the PPC is the opportunity cost of butter. The opportunity cost increases with the quantity of production.

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TABLE 1.2(a) Movement Along PPC in Relation to Figure 1.2(a)

Movement along PPC	Decrease in quantity of sewing machines	Increase in quantity of butter	Opportunity cost of butter
A to B	1	1	1
B to C	2	1	2
C to D	3	1	3
D to E	4	1	4
E to F	5	1	5

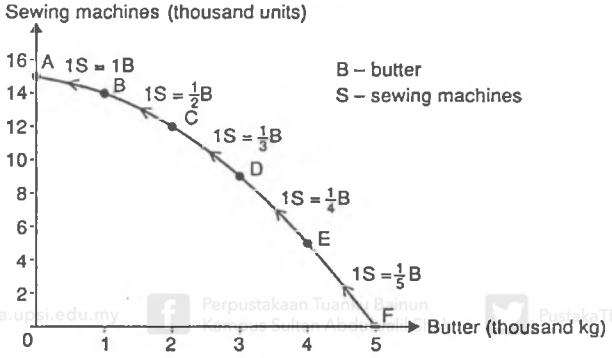


FIGURE 1.2(b) Calculating the Opportunity Cost of One Unit of Sewing Machine

TABLE 1.2(b) Movement Along PPC in Relation to Figure 1.2(b)

Movement along PPC	Decrease in quantity of butter	Increase in quantity of sewing machines	Opportunity cost of sewing machines
B to A	1	1	1
C to B	1	2	$\frac{1}{2}$ = 0.5
D to C	1	3	$\frac{1}{3}$ = 0.33
E to D	1	4	$\frac{1}{4}$ = 0.25
F to E	1	5	$\frac{1}{5}$ = 0.2

The movement from point F to point A on the PPC, is the opportunity cost of sewing machines. The opportunity cost increases with the quantity of production.

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Factors that Influence the Shift of PPC

Factors of production such as land, labour, capital and enterprenuership are the available resources in any economy. The PPC depends on the availability of these resources and technology. Technological improvement, an increase in resources and a growth in the economy will result in the PPC shifting outwards as shown in Figure 1.3. In the event of any natural disaster or a decrease in resources, the PPC will shift inwards as shown in Figure 1.3.

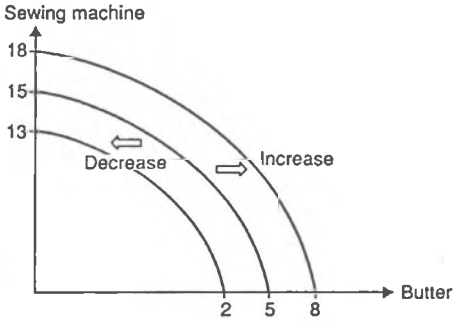


FIGURE 1.3 Shift of PPC

The PPC shifts when there is:

1 Economic Growth

When the country enjoys economic growth, the PPC bounds outward. With economic growth, the production capability of a country increases as there is an expansion of resources such as land, labour, capital and entrepreneurship. The increase in output is due to the availability of new resources, machinery and an increase in productivity. This will shift the PPC to the right as shown in Figure 1.4(a).

Economic Growth
Expansion of production possibilities.

When a country is struck by a natural disaster such as a tsunami, a hurricane or an earthquake, natural resources are either exhausted or reduced. Thus, economic growth will decline and there will be a decrease in outputs. This will shift the PPC to the left as shown in Figure 1.4(b).

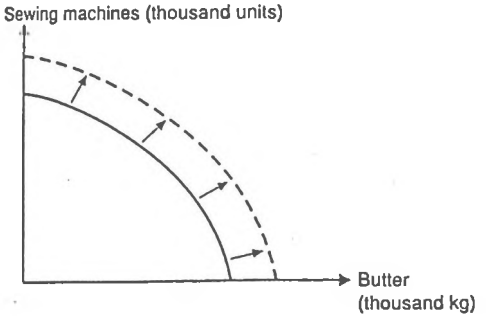


FIGURE 1.4(a) Economic Growth

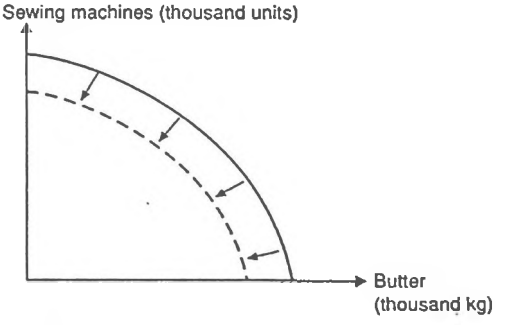


FIGURE 1.4(b) Economic Disaster

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2 Improvements in technology

Technological advances will also increase the production capability of a country. Possible reasons for an increase in output are new innovations, applications of new and efficient techniques of production, or the development of a better way of producing goods and services.

For example, the country JAYA in the previous example was producing both sewing machines and butter. Through innovations in the production of sewing machines, JAYA can produce more sewing machines within the same period. This will shift the production of sewing machines to the right as shown in Figure 1.5(a).

If JAYA has discovered new and more efficient techniques of producing butter with a higher yield, then the production of butter will shift to the right as shown in Figure 1.5(b).

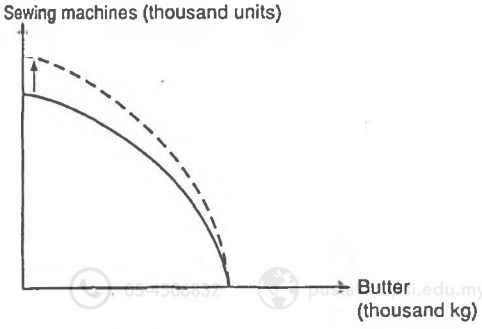


FIGURE 1.5(a) Technology Increases the Production of Sewing Machines

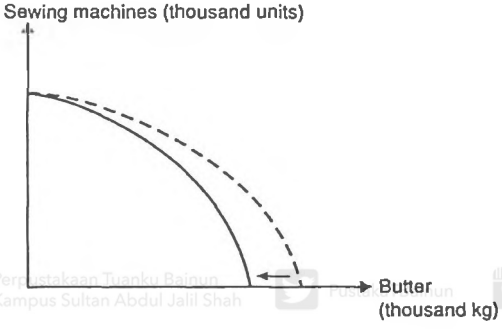


FIGURE 1.5(b) Technology Increases the Production of Butter

3 Population

A population increase can also lead to the PPC shifting outwards. A larger population will result in an increase in production, as shown in Figure 1.6(a). On the other hand, if workers migrate to other countries, there will be a reduction in population. For example, Malaysians migrating to Singapore to work because of more attractive salaries or incentives, will result in the PPC shifting inwards as can be seen in Figure 1.6(b).

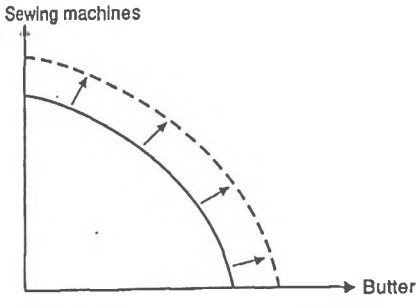


FIGURE 1.6(a) Increase in Population

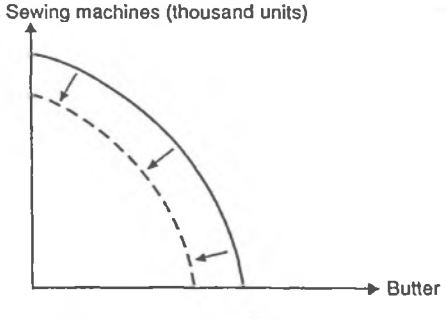


FIGURE 1.6(b) Decrease in Population

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SAMPLE QUESTION

The following table shows the production possibilities combination of Country A that produces two products: CDs and TVs.

Production	Combinations				
	A	B	C	D	E
CD (million)	0	5	10	15	20
TV (million)	20	18	15	6	0

a) Based on the table above draw the production possibility curve for Country A.

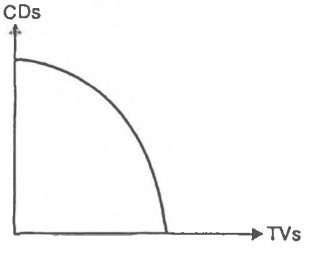
b) Calculate the opportunity cost
   (i) of producing 5 million of CDs.
   (ii) of producing 15 million of CDs.
   (iii) when the production of CDs increases from 10 million to 20 million.

c) Country A wishes to produce 25 million CDs and 30 million units of TVs.
   (i) What is the implication?
   (ii) Suggest two (2) ways in which this production combination can be achieved.

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SUGGESTED SOLUTION

a)



b) (i) 20 – 18 = 2 million TVs
   (ii) 20 – 6 = 14 million TVs
   (iii) 15 million TVs

c) (i) Scarcity
   (ii) Improvement in technology
   Increase in population
   Economic growth
   } Any two answers are acceptable

Shape of the Production Possibilities Curve

The shape of the production possibilities curve (PPC) depends on the opportunity cost. The opportunity cost of sewing machines is calculated based on how much butter the country named JAYA has to give up in order to produce more units of sewing machines and vice versa.

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Increasing opportunity costs means the cost of the country producing more of one product and sacrificing or decreasing the production of another product. In Table 1.1, production of an additional kg of butter that is shown in the move from point A to point B involves foregoing the production of one sewing machine, the move from point B to point C involves foregoing two sewing machines, and the number of sewing machines forgone continues to increase thus. This is the Law of Increasing Opportunity Costs. The PPC for an increasing opportunity cost slopes from left to right and is concave from the origin. Figure 1.7(a) illustrates the increasing opportunity cost.

The PPC also can be convex due to decreasing opportunity costs. For example, if in producing additional butter, fewer sewing machines are forgone. This is illustrated in Figure 1.7(b).

When the opportunity cost is constant, the PPC tends to be linear. When there is additional production of butter, an equal number of sewing machines needs to be sacrificed. This is seen in Figure 1.7(c).

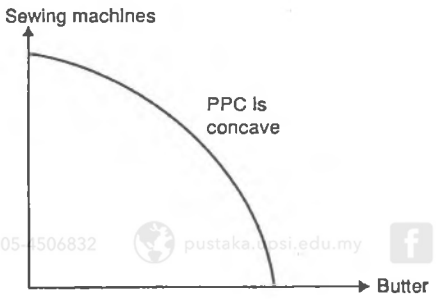


FIGURE 1.7(a) Increasing Opportunity Cost

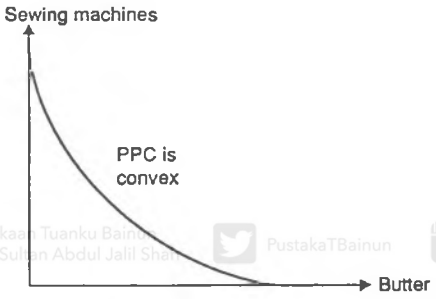


FIGURE 1.7(b) Decreasing Opportunity Cost

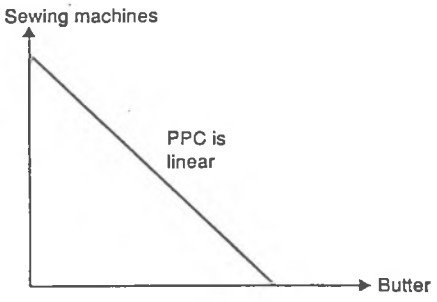


FIGURE 1.7(c) Constant Opportunity Cost

Economic System
A way in which an economy is organized to answer basic economic questions.

ECONOMIC SYSTEM

An economic system is a way of organizing the relationship among individuals, firms and government agencies on how to make choices when confronted with basic economic questions (what to produce, how to produce and for whom to produce). There are three types of economic systems:

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1 Capitalism or Market Economy

2 Socialism or Command Economy, and

3 Mixed Economy

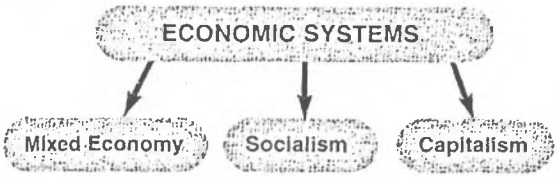


DIAGRAM 1.1 Types of Economic Systems

CAPITALISM

Capitalism or free market economy is an economic system where individuals make all the main economic decisions without any government intervention. In this market, buyers and sellers will meet and enter into transactions. The price system is the main mechanism for any economic activity. This economy is characterized as economic freedom, where an individual can be a buyer, seller, employee or employer at his/her own wish and without any governmental control.

Capitalism
An economic system where individuals and sellers make economic decisions using a price system.

This system is also known as *laissez-faire*, market economy or free enterprise.

Price system
Buyers and sellers meet and make transactions through market prices.

Characteristics

1 Private ownership of resources

Every individual in the country has a right to acquire private ownership of resources. Private individuals or private institutions can own resources. They can accumulate property and use it as they choose. For example, if Amin wants to buy a bungalow in Taman Desa, he can purchase the property if he has sufficient money. Amin can also buy more properties depending on his purchasing power. There is no restriction on the number of properties Amin can own. There is freedom to own private property. However, all governmental laws and regulations must be followed in the process.

There are also certain public facilities provided by the government for public usage such as roads, clinics, and schools.

2 Freedom of enterprise and choice

Individuals are free to own resources as well as to establish any enterprise of their choice. They are free to trade, invest, and organize to produce within the country's legal framework. For example, if John wants to open his own business selling mobile phones, he has the economic freedom to operate this business.

3 Consumers' sovereignty

In capitalism, consumers' sovereignty plays an important role. Consumers' tastes and preferences will affect the production of goods and services. Producers have to produce goods and services to meet consumers' tastes and preferences, otherwise they will be unable to sell what they produce.

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4 Competition
A market economy is also characterized as being highly competitive among producers who aim to obtain the highest profit. When producers compete among themselves, the product will be of high quality and there is also greater efficiency. For example, in the production of shoes, brands such as Reebok and Nike are in constant direct competition. In order to attract more consumers, both producers use various marketing strategies to maximize sales of their product.

5 Government intervention
In capitalism, there is very limited government intervention. The country's role is to stabilize the economic conditions of the country.

6 Price system
The price mechanism is a system used to make economic decisions. Price mechanism means the free operation of demand and supply forces without any intervention. All economic processes of consumption, production, exchange, savings, investment and distribution, work under this price mechanism system, which is labeled as the *Invisible Hand* by Adam Smith.

Merits of Capitalism

1 Production according to the needs of consumers
Producers produce goods and services that consumers want and this maximizes the needs and satisfaction of consumers.

2 Economic freedom
Economic freedom means the right to earn and retain property. It also means a freedom of enterprise and a choice of occupations. This will lead to the sourcing of the country's manpower from different sectors. Therefore, there is flexible functioning of different units of production.

3 Efficient utilization of resources
Competition creates efficiency in production. Quality goods are produced at a lower cost. Consumers get the highest quality goods at a lower cost since production techniques are more efficient.

4 Variety of consumer goods
Competition takes place with regard to all aspects of the product such as shape, colour, design and packaging. Therefore, consumers will enjoy a wide variety of the same product. There is also a variety of consumer goods because of freedom of enterprise, resulting in greater production.

5 Enhanced trade, business, and research and development (R&D)
Entrepreneurs or producers are always on the lookout for new innovations to compete with other producers. This will lead to a rapid expansion and an increase in employment and income. Innovators enjoy the benefits of their research through copyright, patents, etc.

6 Automatic incentives
Capitalism provides encouragement to efficient producers. Efficient producers will benefit from the price mechanism as compared to inefficient producers.

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7 Flexibility

Capitalism provides flexibility that automatically changes with circumstances. For example, during war, the economy will divert its resources to produce more military equipment and when the war is over it will function as a free market.

Demerits of Capitalism

1 Inequality of distribution of wealth and income

Since there is no government intervention in the market economy, the system of private property widens the gap between the rich and the poor. Those who have wealth can obtain resources and start businesses while the poor only have their labour to offer. In other words, the rich get richer and the poor get poorer.

2 Inflation and high unemployment rate

Disparity of demand and supply of labour occurs since it is governed by the 'invisible hand'. Business fluctuations cause high unemployment rates during a depression.

3 Lack of social welfare

In capitalism, social welfare is ignored. Owners do not provide any pension, social security or accident benefits to employees. There is also insufficient provision of social amenities such as schools, hospitals and the like. In this system, undesirable social effects such as theft and crime tend to be high.

4 Unnecessary variety and wasteful competition

Too much competition leads to unnecessary high costs of production. This is because producers bid a high price for resources. There will be a waste of resources as some products are better advertised to attract consumers, resulting in consumers misinterpreting advertisements and being misled.

5 Misallocation of resources

A producer's objective is to maximize profit and he will, therefore, only produce products which give higher profits. This will lead to the production of luxury goods (for rich people), resulting in a surplus, and a lack of production of goods for the poor.

6 Social costs

Workers may face social problems (health problems) arising from the polluted environment caused by an improper disposal of factory wastes. The intention of most producers is to increase private profit and this often leads to a neglect in the welfare of their workers.

Economic Decisions in Capitalism

What to produce

In capitalism, an entrepreneur will only produce goods and services for which there is a demand from consumers so as to enjoy higher profits. Production depends on the goods demanded by the consumer. For example, mobile phones have been in high demand in the country for the last few years. Many producers have allocated their resources to respond to this demand and to produce various kinds of mobile phones.

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How to produce

Firms can produce any product or provide any service using more than one method. The method depends on the relative price of the resources involved. As resources become scarce relative to demand, prices will rise and discourage their usage. For example, a designer of mobile phones has identified three methods of producing the product: by machinery, by hand or by a combination of labour and machinery. Only the cheapest method of production and the most efficient techniques will be adopted in the production of the phone.

For whom to produce

The third economic decision as to who will be receiving goods and services in the capitalism system is answered through the price system. Goods and services are obtained by anyone who can afford them. Goods and services are distributed among the residents of the country. For example, mobile phones are purchased by consumers who are willing to buy them at that selling price.

Socialism
An economic system where all the economic decisions are made by the government or central authority.

SOCIALISM

Socialism is an economic system where all the economic decisions are made by the government or a central authority. There will be no private property rights since the government officially owns all resources. It is also known as a command economy or a planned system.

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Characteristics

1 Public ownership of resources

All the resources are owned and operated by the state or the government in the interest of society as a whole. This is to ensure equal opportunity of all citizens regardless of their income. Public ownership also aims to fully utilize the country's resources.

2 Central planning authority

The central authority is responsible for making economic decisions for society. The authority plans and allocates resources between current consumption and investment for the future.

3 Price mechanism of lesser importance

Socialism gives less importance to market forces. Prices are fixed by the government and not determined by demand and supply. Private profits are not allowed and public interest is emphasized in the command economy.

4 Central control and ownership

A socialist economy is a fully planned economy where the government intervenes in all aspects of economic activity. The government controls production, consumption, and the distribution of goods and services.

Merits of Socialism

1 Production according to basic needs

Production in a socialist economy is mainly directed at producing the basic needs of the people such as food, clothing and building materials. It is not determined by the purchasing power of the rich in society. The phenomenon

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of the rich-getting richer and the poor getting poorer does not exist in the socialist economy.

2 Equal distribution of income and wealth

There is no difference between the rich and the poor. This system provides equal opportunity for all citizens in earning an income. Wealth is also equally distributed since private enterprise is limited.

3 Better allocation of resources

Under the socialist system, the planning authority will allocate resources between current consumption and future investment.

4 No serious unemployment or recession/ inflation

The unemployment rate and inflation are usually taken care of by the government to ensure economic stability in the country.

5 Rapid economic development

In a socialism system, the economy grows faster. The main factors responsible for the rapid economic growth are the full utilization of resources, planning and quick decisions.

6 Social Welfare

The government will provide all citizens of the country with full social security benefits such as pension, accident benefits and others. Since the government is concerned, labour dispute and wastage of resources do not exist in a socialism system.

Demerits of Socialism

1 Lack of incentives and initiative by individuals

Individuals have no profit motive. This will lead to economic inefficiency since jobs are provided by the government and individuals are not motivated to work harder.

2 Loss of economic freedom and consumer sovereignty

Under a socialist economy, the central planning authority or the government directs all economic activity. There is no choice given to the consumer and they accept whatever public enterprises produce. There is little variety in the goods and services produced and availability is restricted. Limited private organizations exist in a socialist economy.

3 Absence of competition

Since there are limited private enterprises, less research and development (R&D) activities are carried out. This results in low quality products since there is no competition.

4 Waste of economic resources

The government may be induced to produce goods and services that are not required by the people such as military equipment. This will lead to an overproduction of certain goods and an underproduction of others.

Economic Decisions in a Socialistic System

What to produce

In socialism, planning authorities decide what to produce. The Central Planning Authority will collect detailed statistics on the resource availability in the country and link it with national priorities. If the planning authority

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feels that the nation needs more computers for current and future consumption, more resources will be allocated for the production of computers over other products.

How to produce

The Central Planning Authority also decides on the techniques to be used in the production of different goods and services. The choice is between traditional and modern techniques of production. For example, the planning authority has a choice of producing computers using more labour or more machinery.

For whom to produce

The distribution of the national product is decided by the Central Planning Authority. The distribution of various commodities among citizens is done through a set of administered fixed processes. Necessity goods are fixed at lower prices, and luxury goods at higher prices. The purpose of these fixed prices is to reduce inequalities in the distribution of income.

Mixed Economy
An economic system which combines both capitalism and socialism systems.

MIXED ECONOMY

This is an economic system which combines both capitalism and socialism to solve basic economic problems. A mixed economy is an economy in which both the public and private sectors play a role in the economy.

In the real world, most countries practice mixed economy.

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Characteristics

1 Public and private ownership of resources

The private and public sectors play important roles in a mixed economy. Private enterprises conduct business freely and the government encourages the private sector by providing them with infrastructure and facilities.

2 Price mechanism and economic plans in making economic decisions

The price mechanism is used to price both goods and services. However, commodities such as sugar, oil and rice are declared as controlled items in Malaysia and the government fixes their prices. Most of the mixed economies accept economic planning as an instrument of economic growth and social justice.

3 Government helps to control income disparity

In most mixed economies, the government controls income disparity through income taxes and welfare payments. The government also has direct control over profits, wages and rents. Thus, the government helps to narrow the income gap between the rich and the poor.

4 Government intervention in the economy

The government will not intervene in the economy except for particular industries. In a mixed economy, the government uses legislation for unsafe goods categorized as illegal products such as military items. The government also uses direct provision, for example, education, defense and health to increase the standard of living.

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The government will carry out certain projects or produce certain goods that the private sector considers unprofitable. For example, low cost housing projects in Malaysia are administered by the government and cater to the lower income group. This project is not a profitable venture for private enterprise.

5 Co-operation between the government, public and business sectors

In mixed economies, there is significant co-operation between the public and private sectors leading to economic development.

6 Government control of monopolies

Monopolists are single players in an industry. They have complete, sole control over the price of goods or services. In order to avoid customers being exploited by monopolists, the government will regulate the power of monopolists.

Economic Decisions in a Mixed Economy System

What to produce

In mixed economies, the question of what to produce is decided by both the public and private sectors. The goods produced and the services provided depend on the consideration of social welfare and economic growth.

How to produce

The public and private sectors will decide on the techniques of production to be used in the production of the different goods and services.

For whom to produce

The distribution of goods and services is also decided by the public and private sectors. The price mechanism does not fully function in mixed economies. In many mixed economies, the government intervenes directly through price controls and indirectly through the imposition of indirect taxes and subsidies.

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SUMMARY OF ECONOMIC SYSTEMS

	Capitalism	Socialism	Mixed Economy
Characteristics	1 Private ownership of resources 2 Freedom of enterprise and choice 3 Consumers' sovereignty 4 Competition 5 Minimum government intervention 6 Price system	1 Public ownership of resources 2 Central Planning Authority 3 Price mechanism of less importance 4 Central control and ownership	1 Public and private ownership of resources 2 Price mechanism and economic plans used to make economic decisions 3 Government helps to control income disparity 4 Government intervention in the economy 5 Large cooperation between the government, public and business sectors 6 Government control of monopolies

(cont.)

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	Capitalism	Socialism	Mixed Economy
Merits	1 Production according to the needs of consumers 2 Economic freedom 3 Efficient utilization of resources 4 Greater variety of consumer goods 5 Enchanced trade, business, and research and development (R&D) 6 Automatic incentives 7 Flexibility	1 Production according to basic needs 2 Equitable distribution of income and wealth 3 Better allocation of resources 4 No serious unemployment or recession/inflation 5 Rapid economic development 6 Social welfare	
Demerits	1 Inequality of distribution of wealth and income 2 Inflation and high unemployment rate 3 Lack of social welfare 4 Unnecessary variety and wasteful competition 5 Misallocation of resources 6 Social costs	1 Lack of incentives and initiative by individuals 2 Loss of economic freedom and consumer sovereignty 3 Absence of competition 4 Waste of economic resources	

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Appendix E

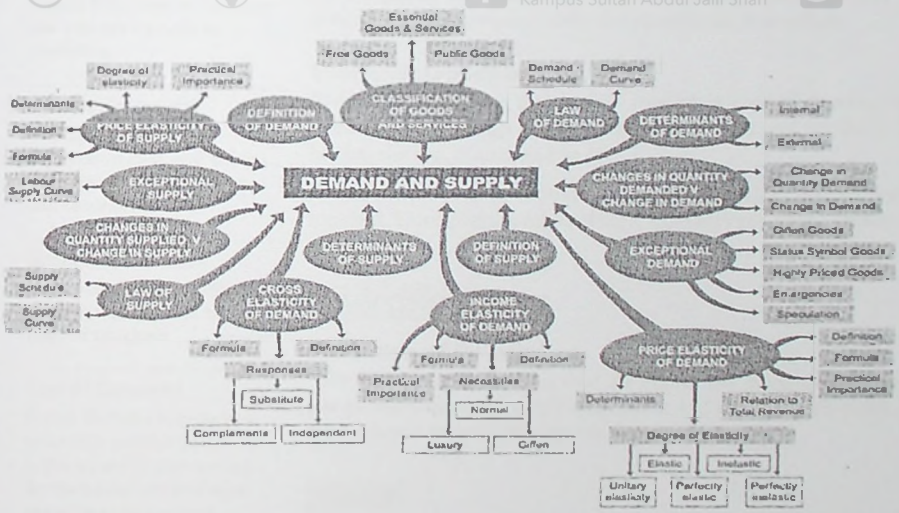
Reading Text 2

CHAPTER 2

DEMAND AND SUPPLY

Chapter Objectives

- To explain the meaning of demand, law of demand and market demand
- To construct a demand schedule and demand curve
- To distinguish between a change in quantity demanded and a change in demand
- To calculate elasticities of demand (price, income and cross) and explain the concept of elasticities
- To determine whether a price change will increase or decrease revenue using price elasticity
- To explain the law of supply and market supply
- To define and calculate the elasticity of supply



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DEFINITION OF DEMAND

Demand The ability and willingness to buy specific quantities of goods in a given period of time at a particular price, *ceteris paribus*.

Ceteris paribus Means holding other factors constant while some other factors change.

Demand is defined as the ability and willingness to buy specific quantities of goods in a given period of time at a particular price, ceteris paribus. Ceteris paribus is a Latin phrase that means holding other factors constant while some other factors change.

Demand differs from desire, wish, want and the like. A mere desire or want for a product, will not cause producers to produce that product and place it in the market. The person who wants or desires to have a product must have the ability to buy and be willing to pay for that product, only then is that desire called a *demand*.

$$\text{Demand} = \underline{\text{willingness}} \text{ to buy} + \underline{\text{ability}} \text{ to buy}$$
[consumer must have money to buy the product]

Desire, want and wish = Only desire but not able to purchase the product.

CLASSIFICATION OF GOODS AND SERVICES

Free goods Goods that have no production cost.

Public goods Goods that have a common use and are benefit to everyone.

Economic goods Goods that involve a production cost and things of value that can be seen and touched.

Economic services Intangible things (with value) which cannot be seen or touched.

Free Goods

Free goods are goods that have no production cost. These are normally considered as gifts of nature such as sunlight, river water and air.

Public Goods

Public goods are goods that are commonly used and are of *benefit to* everyone. For example, public clinics, schools, and others.

Economic Goods and Services

Economic goods are goods that *involve a cost of production*. Economic goods are also things of value that can be seen and touched. Examples are books, clothes, houses and so on.

Economic services are intangible things (with value) which cannot be seen or touched. Examples are medical care, legal services or the movies.

LAW OF DEMAND

Law of Demand States that the higher the price of a product, the lower is the quantity demanded for that product and vice versa, *ceteris paribus*.

Definition of Demand

'The law of demand states that the higher the price of a product, the lower the quantity demanded of that product and the lower the price of a product, the higher is the quantity demanded, ceteris paribus.'

Example

If the price of chicken decreases, the quantity demand for chickens will increase. The consumer will prefer to buy more chickens when these are cheaper. At the same time, a consumer's purchasing power increases since he/she can save more money when the price of chicken falls.

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Assumptions

- Tastes and preference of consumers remain unchanged.
- Consumer's income remains the same.
- Price of related goods (complement or substitutes) should remain unchanged.
- Goods should not have any prestige value.

Based on the law of demand, a negative relationship exists between price and the quantity demanded.

$$P \uparrow Q_{DD} \downarrow$$
$$P \downarrow Q_{DD} \uparrow$$

Demand Schedule and Demand Curve

The demand schedule for a product is a list of the quantity that a buyer is willing to buy at different prices at one particular time. The demand schedule represents a functional relationship between price and quantity demanded. It assumes that other demand determinants such as income, preferences and price of related goods are all constant. Table 2.1 shows the quantity of 'Pilot' pens demanded at each price level.

Demand schedule
A list of the amount that a buyer is willing to buy at different prices at one particular time.

TABLE 2.1 Individual Demand Schedule for 'Pilot' Pens

Price (RM)	Quantity (units)
5	2
4	4
3	6
2	8
1	10

The above demand schedule can be shown in a diagram to show how we obtain a demand curve (see Figure 2.1.)

The demand curve shows the *relationship* between the quantities demanded of a product and its price. The demand curve must slope downwards because of the inverse relationship between price and quantity demanded (according to the Law of Demand).

Demand curve
A line on a graph showing the inverse *relationship* between the quantities demanded of a product and its price.

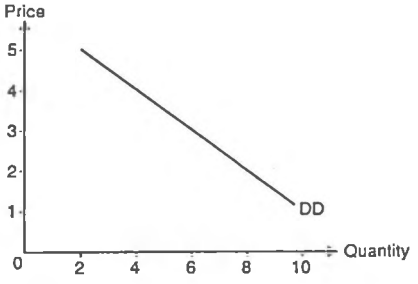


FIGURE 2.1 Demand Curve for 'Pilot' Pens

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Individual demand
Relationship between the quantity demanded by a single buyer and its price.

Individual Demand and Market Demand

We can construct a market demand schedule for 'Pilot' pens. Some buyers with a higher income would be willing and be able to buy more at a particular price, while the lower income group would buy lesser than the former at the same price. Individual demand and market demand can be explained as follows:

Individual demand
The relationship between the quantity of a product demanded by a *single individual* and its price.

Market demand
Relationship between the total quantity demanded by all buyers in the market and its price.

Market demand
The relationship between the total quantity of a product demanded by adding all the quantities demanded by *all consumers* in the market and its price.

MARKET DEMAND IS THE COMBINATION OF INDIVIDUAL DEMANDS

INDIVIDUAL DEMAND 1 + INDIVIDUAL DEMAND 2 = MARKET DEMAND

MARKET DEMAND = Σ *INDIVIDUAL DEMAND*

Let us take the example of 'Pilot' pens. Table 2.2 shows both the individual demand and market demand for the pens.

TABLE 2.2 Market Demand Schedule for 'Pilot' Pens

Price (RM)	Individual 1	Individual 2	Market Demand
5	2	4	6
4	4	5	9
3	6	6	12
2	8	7	15
1	10	8	18

4 + 5 = 9

Plot the demand curves based on the information given in Table 2.2 to show the individual demand and the market demand in a diagram (see Figure 2.2). We have assumed that the market consists of only two individuals, 1 and 2. The market demand curve is a horizontal summation of individual demand curves. We add the individual demands to obtain the market demand.

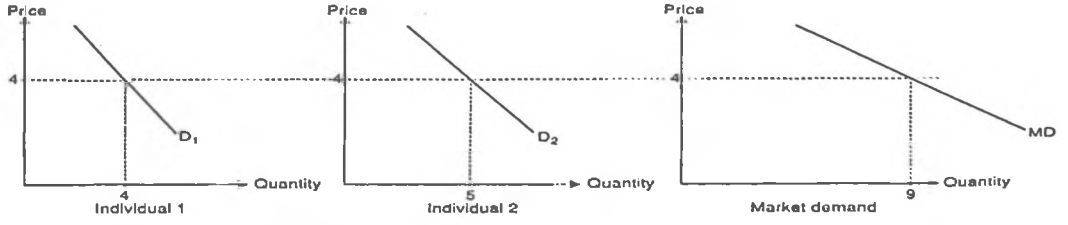


FIGURE 2.2 Individual Demand and Market Demand

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DETERMINANTS OF DEMAND

TIP BOX
A favourite essay question.

Internal Factors

1 Price of goods

The price of the product depends on the cost of production, which in turn will determine the quantity that will be purchased by the consumer. The higher the price, the lower the demand.

2 Service policies or terms of payment

Better customer service and terms of payment by credit instead of cash will increase sales. For example, if Pizza Hut offers better customer service as compared to other fast food outlets, customers would prefer to go to Pizza Hut and this increases the demand for this product.

3 Profit margin

A higher profit margin will lead to an increase in the price of the product and reduce its demand and vice versa.

External Factors

1 Price of related goods

The demand for a product is also affected by a change in the price of related goods. Related goods fall into two categories:

a) *Substitute goods* are goods or services that can be used in *place* of another product or service. For example, a bus ride versus an LRT ride; tea versus coffee, apples versus oranges.

Substitute goods
A product that can be used in *place* of another product.

A change in the price of a substitute product affects the demand for the product in the same direction in which the price changes. Demand for a product will increase, if the price of a substitute product rises and vice versa.

For example, when the price of coffee increases, the quantity demand for coffee will fall (per the law of demand) and people will look for another alternative. Thus, the demand for tea will increase.

$$\therefore P_{coffee} \uparrow Q_{dd\ coffee} \downarrow DD_{tea} \uparrow$$

b) *Complementary goods* are goods that are used in conjunction with another product. For example, a disk and computer; pen and ink; bread and butter.

Complementary goods
A product that is used in conjunction with another product.

The change in the price of a complementary product affects the demand for the product in the *opposite direction* to the price change. Demand for a product will decrease, if the price of complementary goods rises and vice versa.

For example, when the price of pens increases, the quantity demand for pens will fall (per the law of demand) and demand for ink will also decrease as both are used together.

$$P_{pen} \uparrow Q_{dd\ pen} \downarrow DD_{ink} \downarrow$$

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Normal goods
A product that increases in demand with an increase in income.

Inferior goods
A product that decreases in demand with an increase in income.

2 Consumers' income

Other things being equal, when income increases, consumers' demand for more goods and services will increase. Goods that increase in demand as income increases are normal goods. For example, cars, shirts and books. Goods that decrease in demand as income increases are *inferior goods* such as low-grade rice, low-grade potatoes and used cars.

3 Tastes and fashions

Tastes and fashions of consumers change significantly. If a product becomes more fashionable, the demand for it will increase and if the same product becomes outdated, the demand for it will fall. As tastes and fashions change, demand will also change. For example, changes in music, apparel or recreation.

4 Population or number of buyers

Demand depends on the size of the total population or the number of buyers in the market. A larger population with a high rate of growth creates a greater demand for goods and services. The composition of the population means a proportion of young and old; children; a ratio of men and women and they will all affect demand. For example, when the population in Segamat increases, demand for houses, bus services and other goods and services will also increase. Countries with high populations such as India and China have a very high demand for goods and services.

5 Expectation about future prices

The higher the expected future price of a product, the higher the current demand for that product and vice versa. For example, when the government plans to increase the price of sugar the following week, the demand for sugar will immediately increase because consumers want to store for future use because of the expected higher price. If consumers expect the price of cars to fall next year, the present demand for cars this year will decrease since consumers will wait for the price to fall.

6 Advertisements

Advertised goods normally have a higher demand because of awareness. Consumers will only buy goods and services when they are aware of the existence of those products. Advertisements will attract people to the goods and services. For example, soft drink advertisements in Malaysia which carry endorsements by celebrities, attract many consumers to buy the product.

7 Festive seasons and climate

During festive seasons, different products will be in high demand. For example, during Chinese New Year, the demand for mandarin oranges will be greater and during the Hari Raya festivities, the demand for *lemang* and Hari Raya cards will be greater.

8 Level of taxation

The higher the taxes, the lower the purchasing power of consumers. This will lead to a decrease in demand and vice versa. For example, if the government

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reduced income tax by 10%, consumers will have more money to spend on goods and services. This increases the demand for good and services.

9 Supply of money in circulation

The larger the supply of money in circulation, the greater will be the demand for goods and services since consumers have more money to spend.

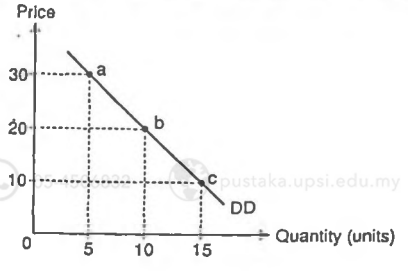
CHANGE IN QUANTITY DEMANDED VERSUS CHANGE IN DEMAND

Changes in determinants of demand influence consumers' purchasing plans and cause a movement or a shift in the demand curve.

TIP BOX

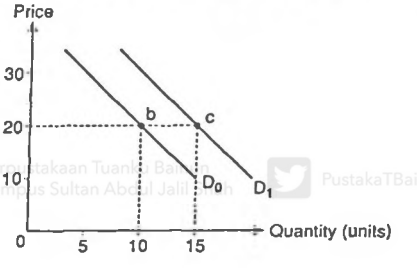
A favourite essay question. An important though confusing concept.

Figure (a) Changes in Quantity Demanded



- ✓ Movement along the demand curve
- ✓ Occurs when ***price of a product changes***
- ✓ Other factors constant
- ✓ Upward movement
  - – *Decrease in quantity demanded (contraction)*
- ✓ Downward movement
  - – Increase in quantity demanded (*Expansion*)

Figure (b) Changes in Demand



- ✓ Shift in the demand curve
- ✓ Occurs when there are ***changes in other factors*** such as population, income, price of related goods, etc.
- ✓ Price of a product remains constant
- ✓ Increase in Demand ($D_0 \rightarrow D_1$)

Demand curve shifts to right if

1 *Price of substitute goods increases*
2 *Price of complement goods decreases*
3 *Income increases (normal goods)*
4 *Expected future price increases*
5 *Number of buyers increase*

- ✓ Decrease in Demand ($D_0 \rightarrow D_1$)

Demand curve shifts to left if

1 *Price of substitute goods decreases*
2 *Price of complement goods increases*
3 *Income decreases (normal goods)*
4 *Expected future price decreases*
5 *Number of buyers decrease*

FIGURES 2.3(a) and (b) Differences between Changes in Quantity Demanded and Changes in Demand

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Change in quantity demanded
Occurs when the price of a product changes and there is movement along the demand curve, *ceteris paribus*.

Change in Quantity Demanded

If the price of products change and other factors are constant, there will be a movement along the demand curve. In Figure 2.3(a), when the price is at RM20, the quantity demand is for 10 units. When the price increases to RM30, the quantity demand falls from 10 units to 5 units. The *movement along the demand* curve from RM20 and 10 units (point b) to RM30 and 5 units (point a) illustrates the *change in quantity demanded.*

An upward movement along the demand curve → Decrease in quantity demanded. (Contraction of demand).
See example from point b to point a.

A downward movement along the demand curve → Increase in quantity demanded. (Expansion of demand).
See example from point b to point c.

Change in demand
Occurs when other factors change but the price of a product is constant, and the demand curve shifts.

Change in Demand

If the price of a product is constant and other factors (refer to the determinant of demand on pages 29–30) change, there will be a *shift of the demand curve.* For example, when the number of buyers or population increases, the demand curve will shift from D_0 to D_1 as shown in Figure 2.3(b). When the price is RM20 on D_0 (point b), the quantity demand is for 10 units and at the same price on D1 (point c), the quantity demand is for 15 units.

EXCEPTIONAL DEMAND

The law of demand is a general statement. However, there are a few exceptions to this general rule. This is called an exceptional demand.

Exceptional Demand
Against the law of demand where as the price increases, the quantity demanded will also increase.

Exceptional Demand is where as the price of a product increases, the demand for it will also increase. (The normal demand curve shows that when price increases, quantity demanded will decrease and when price decreases, the quantity demanded will increase.)

- The demand curve is *positively sloped* as shown in Figure 2.4 below.

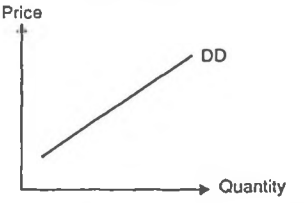


FIGURE 2.4 Exceptional Demand Curve

Exceptional demand occurs in the following instances:

Giffen Goods

Giffen goods or inferior goods are normally consumed by those in the lower income group. This phenomenon was discovered by Sir Robert Giffen and is referred to as the Giffen Paradox. It holds that 'Demand is strengthened with a rise in price or weakened with a fall in price'.

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Example

A person from the lower income group spends a major portion of his income on giffen goods like potatoes and a smaller portion on other commodities such as meat.

When the *price of potatoes increases* while the price of other products and income remain constant, his real income will fall. The monthly income allocated for potatoes will now be smaller than before. So, to avoid starvation, he will readjust his expenditure pattern by reducing his consumption of meat and increasing the quantity of potatoes he would buy.

$$P_{potatoes} \uparrow \text{Real Income} \downarrow Q_{potatoes} \uparrow$$

When the price of potatoes decreases, the poor man, instead of buying more potatoes, will buy more superior or quality products such as meat since his real income (purchasing power) has increased. This reduces the demand for potatoes.

$$P_{potatoes} \downarrow \text{Real Income} \uparrow Q_{potatoes} \downarrow$$

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Status Symbol Goods

This exception to the law of demand is also called Veblen's effect. It is associated with Thorstein Veblen, a famous American economist. There are products which are purchased by people in the higher income groups, not for satisfaction but for their 'snob-appeal' or ostentation. With such status symbol goods, the price is not important as possession of the goods confers a social distinction on the holder.

Some examples are diamonds, precious stones, world famous paintings and so on. When the price of diamonds falls, even those from the lower income group can purchase them. As such, diamonds no longer confer any prestige or social distinction. The rich may then stop buying them and consider diamonds as cheap products. Therefore, the quantity demanded for diamonds will also fall. (Direct relationship)

Speculation

If the price of a product is increasing and is expected to increase further in the near future, the consumer will buy more of the product even at the higher price. The increase in price does not bring about a decrease in its demand, but instead increases the quantity demanded of the product.

For example, if consumers in Malaysia expect the price of sugar to increase further in another week, they will purchase more sugar to store. An expectation of an increase in price will increase the quantity demanded of it.

Speculators in the stock exchange also follow exceptional demand where they will buy more shares if the prices show a rising trend and vice versa.

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Emergencies

During emergency times like war and during natural disasters, people will buy more goods even though the prices of these goods are high. These goods are usually basic necessities such as salt, rice, sugar and oil.

Highly Priced Goods

The exceptional demand may also apply to goods that the consumer judges to be of good quality because a consumer's perception may be such that he views products at a high price as superior products and of high quality. As such, consumers will buy more when the price is high and buy less when the price is low.

For example, when the price of a pair of Nike shoes is high, more people will purchase it because they are of the view that it is of high quality and therefore a more superior product.

PRICE ELASTICITY OF DEMAND (ε_p)

Price elasticity of demand measures the sensitivity/responsiveness of the quantity demanded due to a change in its price.

Formula

$$\text{Price elasticity of demand} = \frac{\%\ \Delta \text{ in quantity demanded}}{\%\ \Delta \text{ in price}}$$

$$= \frac{\Delta Q/Q \times 100}{\Delta P/P \times 100}$$

$$= \frac{\Delta Q}{Q} \times \frac{P}{\Delta P}$$

$$\varepsilon_p = \frac{Q_2 - Q_1}{Q_1} \times \frac{P_1}{P_2 - P_1}$$

Remember this formula.

Example

Question

If the price of pens decreases from RM2 to RM1 and the quantity demand for pens increases from 40 to 50 units, calculate the price elasticity of demand.

Solution

Q1 = 40; Q2 = 50; P1 = 2; P2 = 1. (Fill up the figures in the formula)

$$\varepsilon_p = \frac{Q_2 - Q_1}{Q_1} \times \frac{P_1}{P_2 - P_1}$$

$$= \frac{50-40}{40} \times \frac{2}{1-2}$$

$$= \frac{10}{40} \times \frac{2}{-1} = -0.5$$

An important concept and a favourite structured exam question.

Price elasticity of demand

Measures the sensitivity or responsiveness of the quantity demanded due to a change in its price.

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Generally, the co-efficient of price elasticity of demand always shows a negative sign because there is an inverse relationship between the price and quantity demanded. Therefore, we use the absolute value and the negative signs can be omitted.

$$|\varepsilon_p| = 0.5$$

Degree of Price Elasticity of Demand

• $\varepsilon_p > 1$, *Elastic Demand*

Elastic demand is a condition in which a small percentage change in the price of a product will lead to a larger percentage change in the quantity demanded. For example, when the price of compact discs increases by 5%, the quantity demand for disks will fall by 10%. Goods with high substitutes such as toothpaste and clothing have elastic demand.

Elastic demand
A condition in which a small percentage change in the price of a product will lead to a larger percentage change in the quantity demanded.

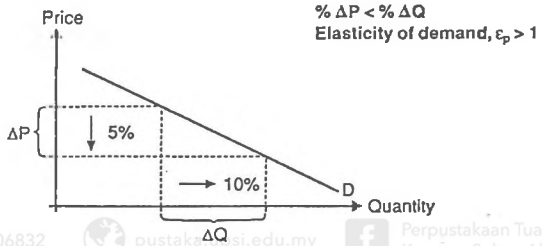


FIGURE 2.5 Fairly Elastic Demand

• $\varepsilon_p < 1$, *Inelastic Demand*

Inelastic demand is a condition in which a large percentage change in the price will only affect the quantity demand by a small percentage. For example, a 10% increase in the price of petrol will lead to a decrease of 2% in the quantity demand for it. Goods with low substitutes such as petrol and cigarettes have an inelastic demand.

Inelastic demand
A condition in which a large percentage change in price will only affect a small percentage change in quantity demanded.

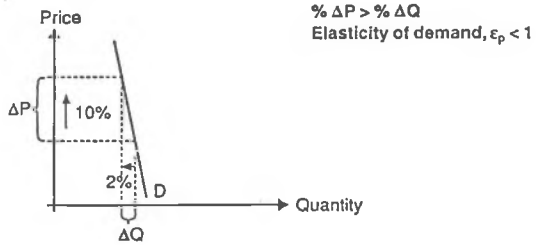


FIGURE 2.6 Fairly Inelastic Demand

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Unitary elastic demand
A condition in which a percentage change in price equals a percentage change in quantity demanded.

- $\varepsilon_p = 1$, *Unitary Elastic Demand*

Unitary elastic demand is a condition in which a percentage change in price equals to a percentage change in quantity demanded. For example, a 5% fall in price leads to exactly a 5% increase in the quantity demand for it.

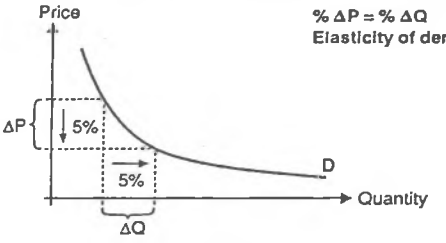


FIGURE 2.7 Unitary Elastic Demand

Perfectly inelastic demand
A condition in which the quantity demanded does not change even though the price changes.

- $\varepsilon_p = 0$, *Perfectly Inelastic Demand*

Perfectly inelastic demand is a condition in which the quantity demand does not change as the price changes. For example, when the price of insulin increases by 10%, the quantity demand remains the same (0% change) because diabetic patients cannot change their consumption based on price.

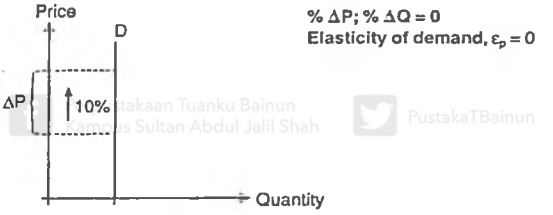


FIGURE 2.8 Perfectly Inelastic Demand

Perfectly elastic demand
A condition in which a small percentage change in price leads to an infinite percentage change in the quantity demanded.

- $\varepsilon_p = \infty$, *Perfectly Elastic Demand*

Perfectly elastic demand is a condition in which a small percentage change in the price leads to an infinite percentage change in the quantity demanded. The demand curve is perfectly horizontal as shown in Figure 2.9. When the price is at RM10, the quantity demand would be for 5 units. When there is a price change (increase or decrease), there will be a zero quantity demand. Perfectly elastic demand is very rare in real life.

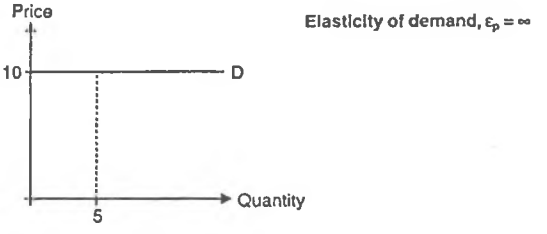


FIGURE 2.9 Perfectly Elastic Demand

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Determinants of Price Elasticity of Demand

1 Existence of substitutes

For products with many substitutes, demand is more elastic because consumers are very responsive to changes in the price of products. For example, if the price of apples increases, consumers can substitute apples with other fruits, so the demand is elastic. For products with low or no substitutes, demand is inelastic because consumers have no choice or there are no suitable substitutes when there is a price increase and thus demand is less sensitive towards price change. For example, if the price of petrol increases, consumers have no substitute for petrol, so there is less reaction towards price change.

2 Proportion of the expenditure on a product

Demand sometimes depends on the value of a product, that is, whether it is cheaper or more expensive. For example, if the price of tomatoes increases by RM0.10, consumers will be less sensitive to the price change because only a small proportion of their income is spent on it. When a greater proportion of their income is spent on a more expensive product, such as a car, demand will be elastic.

3 Nature of goods

The demand for necessity goods is *inelastic* compared to the demand for less important goods which are then more *elastic*. Necessity goods like rice, water and electricity have inelastic demand because changes in price will not much affect the quantity demanded. In the case of goods like jewellery, cars and houses demand is elastic as an increase in price will greatly affect the quantity demanded.

4 Income level

People in the higher income group will tend to have *inelastic demand* because they become less sensitive towards price changes. Any price increase of commodities will not affect the quantity demanded by consumers in this group. However, the same price increase for consumers in the lower income group will affect their budget. For example, if the price of a shirt increases by 20% or RM10, a rich man will still buy it because he is less sensitive to the price increase. However, a poor man will react to the RM10 increase because of his small income.

5 Time dimensions

The longer the time period, the more elastic the demand. Short-term price changes will have *inelastic demand* because there is not enough time to look for substitutes and buyers respond less to these price changes. However, price changes in the long term will have an *elastic demand* because buyers will have more information on the availability of substitute goods.

6 Habits

People who smoke cigarettes and consume alcohol will have *inelastic demand* for these goods. An increase in price will bring about little change in the quantity demand because demand will respond less to the price change, as demand is inelastic.

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7 Complementary goods

Goods that have joint demand are inelastic. An example of this is pen and ink. If the price of ink increases, the demand for pens will be inelastic because we need the ink to use a pen. So, consumers will be less sensitive towards the price of complementary goods.

8 Frequently purchased products

Products which are purchased more frequently, such as coffee and sugar will tend to have *inelastic demand*. Products that are rarely purchased such as diamonds, will have elastic demand.

TABLE 2.3 Summary of the Determinants of Demand and Determinants of Price Elasticity of Demand

Determinants of Demand	Determinants of Price Elasticity of Demand
1 Price of related goods	1 Existence of substitutes
2 Consumer's income	2 Proportion of expenditure on a good
3 Consumer's fashion, taste and preferences	3 Nature of the goods
4 Population	4 Income level
5 Expectation about future prices	5 Time dimensions
6 Advertisements	6 Habits
7 Festive seasons and climate	7 Complementary goods
8 Level of taxation	8 Frequently purchased product
9 Supply of money in circulation	

TIP BOX

Very important for essay and multiple-choice questions. Important to differentiate both the determinants for better understanding.

Elasticity Along a Linear Demand Curve

Elasticity is not the same concept as a slope. The price elasticity of demand for a downward sloping linear demand curve varies but the slope is constant. Figure 2.10 shows the linear demand curve and the elasticities.

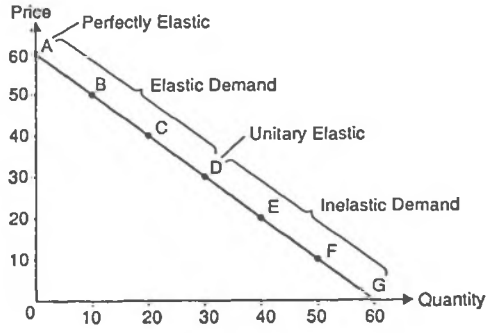


FIGURE 2.10 Elasticity Along Demand Curve

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TABLE 2.4 Elasticity Along Demand Curve

Price	Quantity Demanded	Elasticity	
60	0	∞	— Perfectly elastic
50	10	5	Elastic
40	20	2	Elastic
30	30	1	— Unitary elastic
20	40	0.5	— Inelastic
10	50	0	— Perfectly inelastic
0	60		

Table 2.4 shows that demand is elastic at all points above the mid-point and inelastic at all points below the mid point (elasticity demand = 1) of the demand curve.

Price Elasticity of Demand and Relation to Total Revenue

The producer or seller of a product needs to know the reaction of consumers towards a price change. The information on price elasticity of demand will be useful for the seller to adjust his selling price since it will affect his total revenue. Total revenue is defined as price multiplied with quantity.

$$\text{Total Revenue (TR)} = \text{Price (P)} \times \text{Quantity (Q)}$$

When customers react strongly to an increase in price, the total revenue will move in the opposite direction of the price change and vice versa.

Question

John owns a coffee shop and is doing quite well in his business. He plans to increase his total revenue. Should John increase the price or decrease the price of a cup of coffee?

- To answer this question, first of all we need to find the elasticity of demand for John's coffee shop.
- If there are many other coffee shops in the area, then demand is elastic. John must reduce the price in order to attract other customers to his shop, and thus increase his total revenue.
- If John's coffee shop is the only shop in the area, demand is inelastic. If John increases his price for a cup of coffee, customers have less substitutes and therefore, his total revenue will increase.

The example above can be described in more detail as below:

Demand is inelastic

- An *increase in price* will lead to an *increase in total revenue* and *decrease in price* will lead to a *decrease in total revenue. (Price and total revenue in the same direction)*
  - For example, when the price of petrol is RM1.00 per litre, the total revenue for 15 litres will be RM15 (RM1 × 15). When the price increases to RM1.50, the quantity demand will drop to 13 litres. Total revenue will increase to RM16.50 (RM1.50 × 13).

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– An increase in price will lead to an increase in total revenue since quantity demand is less sensitive to any price change.

$$P\uparrow \times Q_{DD}\downarrow = TR\uparrow \quad \text{(weak)}$$

Demand is elastic

- An *increase in price* will lead to a *decrease in total revenue* and *a decrease in price* will lead to an *increase in total revenue. (Price and total revenue are in the opposite direction)*
  - For example, when the price of a bag is RM20.00 per unit, the total revenue earned from 10 bags will be RM200 (RM20 × 10). A price increase to RM30, will lead to a drop of 5 bags in quantity demand and the total revenue will be RM150 (RM30 × 5).
  - An increase in price will lead to a decrease in total revenue since the quantity demand is sensitive to price changes.

$$P\uparrow \times Q_{DD}\downarrow = TR\downarrow \quad \text{(Strong)}$$

Demand is unitary elastic

- An *increase or decrease in price* will not affect *total revenue*
  - Total revenue is unchanged for unitary elastic demand because the percentage change in price and the percentage change in quantity demand are equal.

$$P\uparrow \times Q_{DD}\downarrow = TR \text{ unchanged}$$

An example of a relationship between price elasticity of demand and total revenue can be illustrated by the table below.

TABLE 2.5 Relationship between Price Elasticity of Demand and Total Revenue

Value of elasticity	Degree of elasticity	Price changes	Quantity demanded changes	Total revenue (TR = P × Q)
Greater than 1	Elastic Demand	Increase in price (↑10%)	Fall in quantity (↓20%)	Decrease (↓10%)
$\varepsilon_p > 1$		Decrease in price (↓10%)	Rise in quantity (↑20%)	Increase (↑10%)
Less than 1	Inelastic Demand	Increase in price (↑10%)	Fall in quantity (↓5%)	Increase (↑5%)
$\varepsilon_p < 1$		Decrease in price (↓10%)	Rise in quantity (↑5%)	Decrease (↓5%)
Equal to 1	Unitary Demand	Increase in price (↑10%)	Fall in quantity (↓10%)	Constant (↔ 0%)
$\varepsilon_p = 1$		Decrease in price (↓10%)	Rise in quantity (↑10%)	Constant (↔ 0%)

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SAMPLE QUESTION

Indicate what happens to the total revenue (whether it increases, decreases or remains constant).

Price	Quantity Demanded	Price elasticity of demand	Total Revenue
Increase	Decrease	More than one	
Decrease	Increase	Less than one	
Decrease	Increase	More than one	
Increase	Decrease	One	

SUGGESTED SOLUTION

Total Revenue
Decrease
Decrease
Increase
Constant

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Practical Importance of Price Elasticity of Demand

1 Pricing Theory

Sellers can fix a higher price for products, which are inelastic, for demand to earn a higher revenue and vice versa (products sold in an imperfect market). Monopolist firms can practise price discrimination if products are elastic for one group of people and inelastic for another group. Price elasticity of demand provides information about the effect of price change on the total revenue. For example, when the price of cigarettes increases, total revenue increases because this is due to the demand for cigarettes being inelastic.

2 Public Finance Theory

Price elasticity of demand also helps the government to plan its taxation policies. The Government can impose higher taxes for goods with an inelastic demand and lower taxes if the demand is elastic.

INCOME ELASTICITY OF DEMAND (ε_y)

Income elasticity of demand measures the responsiveness or sensitivity of changes in the quantity demand for a product due to a change in income. Consumers' incomes will affect the demand for different products.

Income elasticity of demand
Measures the responsiveness or sensitivity of changes in quantity demanded of a product due to a change in income.

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Formula

$$\text{Income elasticity of demand} = \frac{\%\ \Delta \text{ in quantity demanded}}{\%\ \Delta \text{ in income}}$$

$$= \frac{\Delta Q/Q \times 100}{\Delta Y/Y \times 100}$$

$$= \frac{\Delta Q}{\Delta D} \times \frac{Y}{\Delta Y}$$

$$\varepsilon_y = \frac{Q_2 - Q_1}{Q_1} \times \frac{Y_1}{Y_2 - Y_1}$$

Example

Question

If income increases from RM1000 to RM2000 and the quantity demand for the product increases by 20 to 30 units, calculate the income elasticity of demand.

Solution

$Q_1 = 20$; $Q_2 = 30$; $Y_1 = 1000$; $Y_2 = 2000$. (Fill up the figures in the formula)

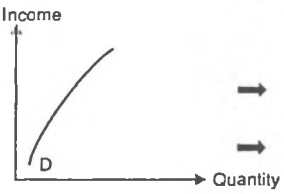
$$\varepsilon_y = \frac{Q_2 - Q_1}{Q_1} \times \frac{Y_1}{Y_2 - Y_1}$$

$$= \frac{30-20}{20} \times \frac{1000}{2000-1000}$$

$$= \frac{10}{20} \times \frac{1000}{1000} = 0.5$$

Responses of Income Elasticity

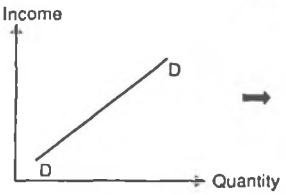
$0 < \varepsilon_y < 1$ ➡ Inelastic income is a condition in which the quantity demand for a product increases as income increases although the income increases faster than the quantity demand.



➡ This type of goods are *normal goods*, for example food and clothing.

➡ Curves are *upward sloping*.

$\varepsilon_y < 1$ ➡ Elastic income is a condition in which as the income increases, the quantity demand for a product increases, although the latter increases at a faster rate.

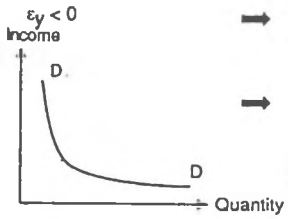


➡ This type of goods are *luxury goods*, for example, antique furniture, luxury cars, gold and jewellery.

⇓

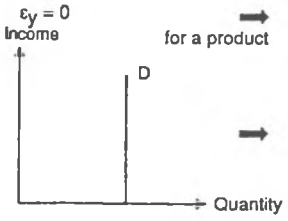
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➡ Negative income elasticity of demand is a condition in which the quantity demand for a product decreases as income increases.

➡ This type of goods are *giffen goods* or *inferior goods*. For example, used cars, salted fish and low grade potatoes.



➡ Zero income elasticity of demand is a condition in which the quantity demanded for a product does not change even though income increases.

➡ This type of goods are *necessity goods*. For example, rice, vegetables, salt.

Practical Importance of Income Elasticity of Demand

1 Forecasting

Knowledge of income elasticity demand allows managers to forecast future demand and prepare supply to meet demand. For example, when the country is expected to be in a state of recession, the producers can plan what products to sell during recession. The type of products sold can be inferior goods. When the economy reaches its peak period, luxury or normal products will be in higher demand.

2 Promotional Strategy

Different target groups are chosen to promote different products. If the product is a normal product, promotion will be effective to the middle class. In the case of luxury goods, the target group will be those who belong to the higher income bracket. Products such as low grade potatoes will be targeted at people in the lower income groups. Promotions can therefore be planned accordingly.

CROSS ELASTICITY OF DEMAND (ε_x)

Cross elasticity of demand measures the responsiveness or sensitivity of quantity demanded for one product (Qdx) due to a change in the price of related product (Py).

Cross elasticity of demand
Measures the responsiveness or sensitivity of quantity demanded of a product due to a change in the price of a related product.

Formula

$$\text{Cross elasticity of demand} = \frac{\%\ \Delta \text{ in quantity demanded of good X}}{\%\ \Delta \text{ in price of good Y}}$$

$$= \frac{\Delta Q_x / Q_x \times 100}{\Delta P_y / P_y \times 100}$$

$$= \frac{\Delta Q_x}{Q_x} \times \frac{P_y}{\Delta P_y}$$

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$$\varepsilon_x = \frac{Q_{x2} - Q_{x1}}{Q_{x1}} \times \frac{P_{y1}}{P_{y2} - P_{y1}}$$

Example

Question

If the quantity demand for chicken increases by 20% when the price of beef increases from RM0.40 to RM0.50, calculate the cross elasticity of demand between chicken and beef.

Solution

$\Delta Q_x = 0.2$; $P_{y1} = 0.40$; $P_{y2} = 0.30$ (Fill up the figures into the formula)

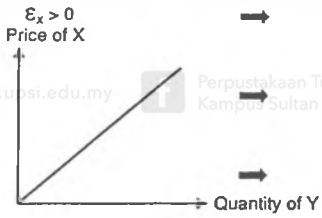
$$\varepsilon_y = \frac{Q_{x2} - Q_1}{Q_{x1}} \times \frac{P_{y1}}{P_{y2} - P_{y1}}$$

$$= 0.2 \times \frac{0.4}{0.5 - 0.4}$$

$$= 0.2 \times \frac{0.4}{0.1} = 0.8$$

Positive cross elasticity → substitute goods

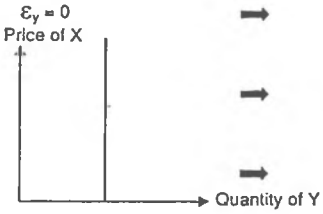
Responses of Cross Elasticity



An *increase* in the price of one product will *increase* the quantity demanded of another product and vice versa.

Applies to *substitute goods*. When the price of chicken increases, the quantity demand for beef will increase.

Positive cross elasticity.

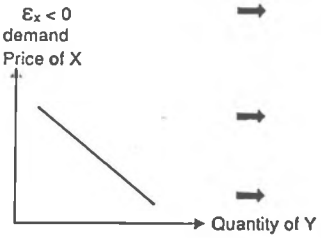


An *increase* in the price of one product will *decrease* the demand for another product and vice versa.

Applies to *complementary goods*. When the price of ink increases, the quantity demand for pens decreases.

Negative cross elasticity.

⇓



An *increase* in the price of one product will *not affect* the demand of another product and vice versa.

The product has *no relationship*. An increase in the price of oil has no effect on the demand for houses.

Zero cross elasticity.

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TABLE 2.6 Summary of Elasticities of Demand

	Price elasticity of demand	Income elasticity of demand	Cross elasticity of demand
Definition	*Measures the sensitivity/ responsiveness of the quantity demand of a product due to a change in its price.*	*Measures the sensitivity/ responsiveness of the quantity demand of a product due to a change in income.*	*Measures the sensitivity/ responsiveness of the quantity demand for one product (Qx) due to a change in the price of a related product (Py).*
Formula	$\varepsilon_p = \frac{\%\ \Delta \text{ in quantity demanded}}{\%\ \Delta \text{ in price}}$ $\varepsilon_p = \frac{Q_2 - Q_1}{Q_1} \times \frac{P_1}{P_2 - P_1}$	$\varepsilon_y = \frac{\%\ \Delta \text{ in quantity demanded}}{\%\ \Delta \text{ in income}}$ $\varepsilon_p = \frac{Q_2 - Q_1}{Q_1} \times \frac{Y_1}{Y_2 - Y_1}$	$\varepsilon_y = \frac{\%\ \Delta \text{ in quantity demanded (Qx)}}{\%\ \Delta \text{ in price of Product Y (Py)}}$ $\varepsilon_p = \frac{Q_{x2} - Q_{x1}}{Q_{x1}} \times \frac{P_{y1}}{P_{y2} - P_{y1}}$
Coefficient and Relationship	$\varepsilon_p > 1$ Elastic $\varepsilon_p < 1$ Inelastic $\varepsilon_p = 1$ Unit elastic $\varepsilon_p = 0$ Perfectly inelastic $\varepsilon_p = \infty$ Perfectly elastic	$\varepsilon_y > 1$ Luxury goods $0 < \varepsilon_y < 1$ Normal goods $\varepsilon_y = 0$ Neutral goods $\varepsilon_y < 0$ Inferior goods	$\varepsilon_x > 0$ Substitutes $\varepsilon_x < 0$ Complements $\varepsilon_x = 0$ Independent (no relationship)

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SAMPLE QUESTION

The table below shows the relationship between the price of a product A and the quantity demand for products A and B.

Price of A (RM)	Quantity Demand for A (kg)	Quantity demand for B (kg)	Consumers' Income (RM)
6.00	100	20	2000
6.50	90	30	1800
7.00	70	50	1600
7.50	40	70	1400
8.00	10	85	1200

a) Calculate the price elasticity of demand for A if the price of A increases from RM7.00 to RM8.00 per kg and indicate whether the demand is elastic or inelastic?

b) Calculate the cross elasticity of demand for B when the price of A decreases from RM7.50 to RM6.50. Are A and B complements or substitutes?

c) When the income of consumers increases from RM1400 to RM1800, calculate the income elasticity of demand for A and B. What types of products are A and B?

d) List two (2) factors that can influence the price elasticity of demand.

TIP BOX

An important and favourite question for exams.

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SUGGESTED SOLUTION

a) $\varepsilon_d = \dfrac{\%\,\Delta Q_d}{\%\,\Delta Y} = \dfrac{Q_2 - Q_1}{Q_1} \times \dfrac{P_1}{P_1 - P_1}$

$= \dfrac{10 - 70}{70} \times \dfrac{7}{8 - 7}$

$= -0.857 \times 7 = -6$ (ignore the negative sign)

$\varepsilon_d = 6$, Demand is elastic since $\varepsilon_d > 1$

b) $\varepsilon_x = \dfrac{\%\,\Delta Q_{dB}}{\%\,\Delta P_A} = \dfrac{Q_{B2} - Q_{B1}}{Q_{B1}} \times \dfrac{P_{A1}}{P_{A2} - P_{A1}}$

$= \dfrac{30 - 70}{70} \times \dfrac{7.5}{6.50 - 7.50}$

$= -0.57 \times -7.5$

$= 4.28$

$\varepsilon_x = 4.28$, Products A and B are substitutes.

c) Income elasticity for Good A

$\varepsilon_y = \dfrac{\%\,\Delta Q_{dA}}{\%\,\Delta Y} = \dfrac{Q_{A2} - Q_{A1}}{Q_{A1}} \times \dfrac{P_{A1}}{P_{A2} - P_{A1}}$

$= \dfrac{90 - 40}{40} \times \dfrac{1400}{1800 - 1400}$

$= 1.25 \times 3.5$

$= 4.38$

$\varepsilon_{yA} = 4.38$, A is a luxury good.

Income elasticity for B

$\varepsilon_y = \dfrac{\%\,\Delta Q_{dB}}{\%\,\Delta Y} = \dfrac{Q_{B2} - Q_{B1}}{Q_{B1}} \times \dfrac{Y_1}{Y_2 - Y_1}$

$= \dfrac{30 - 70}{70} \times \dfrac{1400}{1800 - 1400}$

$= -0.57 \times 3.5$

$= -1.99$

$\varepsilon_{yB} = -1.99$, B is an inferior or Giffen goods.

d) Determinants of price elasticity of demand. (Any two answers.)

1 Existence of substitutes
2 Proportion of the expenditure on a good
3 Nature of the goods
4 Income level
5 Time dimensions
6 Habits
7 Complementary Goods
8 Frequency of purchased product

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DEFINITION OF SUPPLY

Supply is defined as the ability and willingness to sell or produce a particular product and service in a given period of time at a particular price, *ceteris paribus*.

Supply
The ability and willingness to sell or produce particular goods and services within a given period of time at a particular price, *ceteris paribus*

LAW OF SUPPLY

Definition

The law of supply states that the higher the price of a product, the greater is the quantity supplied of that product and the lower the price, the lower is the quantity supplied, ceteris paribus.

Law of supply
States that the higher the price of a product, the higher is the quantity of the product supplied and vice versa, *ceteris paribus*.

Example

If the price of chicken increases, the quantity of chicken supplied will increase since the seller will sell more to earn more profit.

Assumptions

- Cost of production remains constant.
- Number of sellers remain the same.
- Price of related goods (complements or substitutes) do not change.
- Availability of other inputs remain unchanged.

Based on the law of supply, a positive relationship exists between the price and the quantity supplied.

$P \uparrow Q_{ss} \uparrow$
$P \downarrow Q_{ss} \downarrow$

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Supply Schedule and Supply Curve

The supply schedule for a product is the list of quantity supplied at different prices assuming all other influences are constant. The supply schedule represents a functional relationship between price and quantity supplied. It assumes that other supply determinants such as the state of technology, government policies and price of related goods are all constant. Table 2.7 shows the quantity of pilot pens supplied at each price level.

Supply schedule
A list of the quantity supplied at each different price, ceteris paribus.

TABLE 2.7 The Individual Supply Schedule for 'Pilot' Pens

Price (RM)	Quantity (units)
5	10
4	8
3	6
2	4
1	2

A supply curve shows the relationship between the quantities supplied of a product and its price provided everything else is constant. It is an *upward sloping curve*.

Supply curve
A line on graphs shows the direct relationship between the quantities supplied of a good and its price.

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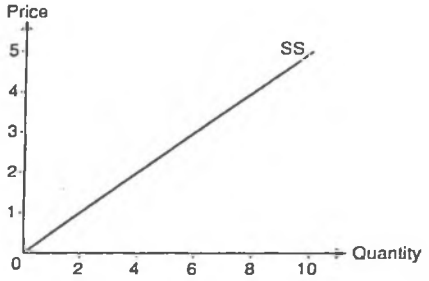


FIGURE 2.11 Supply Curve for 'Pilot' Pens

Individual supply
Relationship between the quantity supplied by a single seller and its price.

Individual Supply and Market Supply

We can construct a market supply schedule for 'Pilot' pens. Some sellers would be willing to sell more at a particular price while some sellers would sell fewer. The individual supply and the market supply can be explained as below:

Individual supply
The relationship between the quantity of a product supplied by a single seller and its price.

Market demand
Relationship between the total quantity supplied by all sellers in the market and its price.

Market supply
The relationship between the total quantity of a product supplied by adding all the quantities supplied by all sellers in the market and its price.

MARKET SUPPLY IS THE COMBINATION OF INDIVIDUAL SUPPLY

INDIVIDUAL SUPPLY 1 + INDIVIDUAL SUPPLY 2 = MARKET SUPPLY

$$MARKET\ SUPPLY = \Sigma\ INDIVIDUAL\ SUPPLY$$

Let us take the example of 'Pilot' pens. Table 2.8 shows both the individual and the market supply for 'Pilot' pens.

TABLE 2.8 Market Supply Schedule for 'Pilot' Pens

Price (RM)	Seller A	Seller B	Market Supply
5	10	8	18
4	8	7	15
3	6	6	12
2	4	5	9
1	2	4	6

8 + 7 = 15

Plot the supply curves based on the information given in Table 2.8. (See Figure 2.12). We have assumed that the market consists of only two sellers, A and B. The market supply curve is a horizontal summation of individual supply curves. We add the individual supplies to obtain the market supply.

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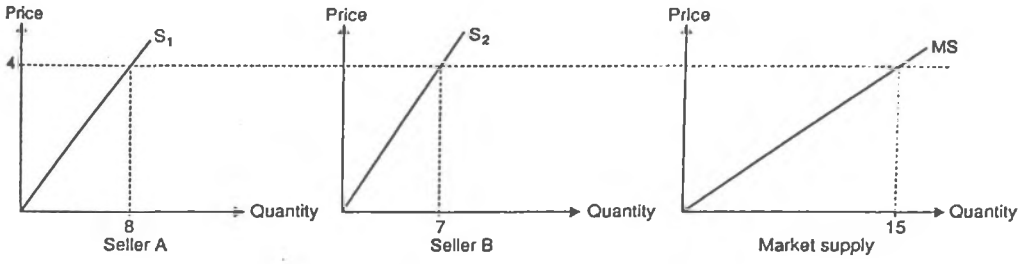


FIGURE 2.12 Market Supply Curve for 'Pilot' Pens

DETERMINANTS OF SUPPLY

TIP BOX

A favourite essay question.

1 Price of related goods

The supply of a product can be influenced by the price of related goods:

a) *Substitute goods*

Supply of a product will decrease if there is an increase in the price of a substitute product, for example, Pepsi and Coke.

When the price of Pepsi *increases*, the quantity supplied will increase (per law of supply) and the quantity of Coke will decrease.

$$P_{pepsi} \uparrow Q_{ss\ pepsi} \uparrow SS_{coke} \downarrow$$

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b) *Complementary goods*

An increase in the price of a product will increase the supply of a complementary product. For example, pen and ink.

When the price of pens increases, the quantity of pens supplied will increase (per law of supply) and the supply of ink will also increase since both are complementary goods.

$$P_{pen} \uparrow Q_{ss\ pen} \uparrow SS_{ink} \downarrow$$

2 Cost of production

Supply will change in response to the *factors of production*: labour, capital or land. When the cost of production increases, the quantity supplied will decrease and vice versa. For example, an increase in the wages of labour and price of capital equipment in the production of tapes, will increase the cost of production and thus reduce the supply of tapes.

3 Expected future price

The higher the expected future price of a product, the smaller the current supply of the product and vice versa. For example, when the government announces an increase in the price of sugar, the current supply will decrease because the supplier wants to gain a higher profit with a higher new price.

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4 Technological advancement
Changes in technology are the most important influences on supply. New technologies that enable producers to use fewer factors of production will *lower the cost of production* and *increase supply*. For example, when new technology was introduced in paddy harvesting, the supply of rice increased.

5 Number of sellers
The larger the number of firms supplying a product, the larger the quantity supplied of the product and vice versa. For example, if there is an increase in the number of cafeterias in a university campus, the supply of food and drink will increase.

6 Government policies
a) *Taxes* → Taxes will *decrease the supply* of goods and services because taxes *discourage* producers from producing extra and this increases the cost of production.

b) *Subsidies* → Subsidies will *increase supply* as subsidies *encourage* producers to produce more.

The impact of government policies, taxes and subsidies will be discussed in more detail in Chapter 3.

7 Improvement in infrastructure
Improvements in transportation and communication will facilitate free and fast movement of goods and services within the country. This increases the supply of the product.

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TIP BOX
Same concept as in demand

CHANGE IN QUANTITY SUPPLIED VERSUS CHANGE IN SUPPLY

Changes in the influence the sellers' plans can cause a movement or a shift in the supply curve.

Change in quantity supplied
Occurs when the price of a product changes and there is a movement along the supply curve, *ceteris paribus*.

Change in Quantity Supplied
If the price of a product changes while other factors remain constant, there will be a movement along the supply curve. The *movement along the supply* curve illustrates *changes in the quantity supplied*.

An upward movement along the supply curve → Increase in quantity supplied
See example from point b to point a.

A downward movement along the supply curve → Decrease in quantity supplied
See example from point b to point c.

Change in supply
Occurs when other factors change but the price of a product remains constant, supply curve will shift.

Change in Supply
If the price of a product is constant and other factors (refer to the determinant of supply on pages 49–50) change, there will be a *shift of the supply curve*.

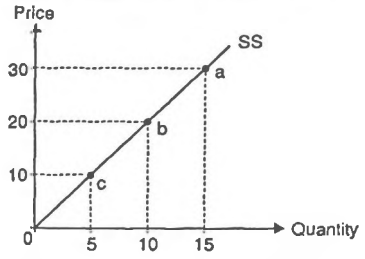
An increase in supply → supply increases and supply curve shifts to the right.

A decrease in supply → supply decreases and supply curve shifts to the left.

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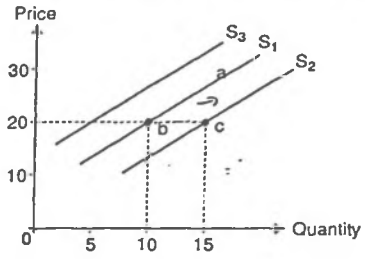
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A Changes In Quantity Supplied



- ✓ Movement along the supply curve
- ✓ Occurs when ***price of a product changes***
- ✓ Other factors remain constant
- ✓ Upward movement
  - price of a product rises, the *quantity supplied increases.*
  - *Example: from point b to point a*
- ✓ Downward movement
  - price of a product falls, the *quantity supplied decreases.*
  - *Example: from point b to point c*

B Changes in Supply



- ✓ Shift in the supply curve
- ✓ Occurs when there are ***changes in other factors*** such as technology, government policies, price of related goods, etc.
- ✓ Price of a product remains constant
- ✓ Increase in Supply ($S_1 \rightarrow S_2$)

Supply curve shifts to right if

1. *Price of substitute goods decreases.*
2. *Price of complementary goods increases.*
3. *Price of input decreases.*
4. *Expected future price decreases.*
5. *Increase in number of sellers.*
6. *Government provides subsidy to sellers.*

- ✓ Decrease in Supply ($S_1 \rightarrow S_3$)

Supply curve shifts to left if

1. *Price of substitute goods increases.*
2. *Price of complementary goods decreases.*
3. *Price of inputs increases.*
4. *Expected future price increases.*
5. *Decrease in number of sellers.*
6. *Government imposes tax on sellers.*

FIGURES 2.13(a) and 2.13(b) Differences between Changes in Quantity Supplied and Changes in Supply

EXCEPTIONAL SUPPLY

The Law of Supply is a general statement. The exception occurs when the price of a product increases and the supply decreases. (The normal supply curve shows that when price increases, quantity supplied will increase and when price decreases, quantity supplied will decrease).

Exceptional Supply
Is against the law of supply where as the price increases, the quantity supplied decreases.

- Supply curve is *negatively sloped*

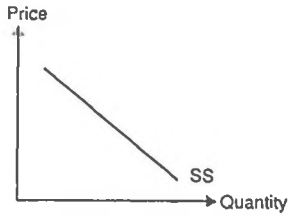


FIGURE 2.14 Exceptional Supply Curve

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Normally, this happens in the *supply of labour* and this is known as the *'Backward Bending Labour Supply Curve'*.

Supply of labour is defined as the number of hours or days a particular type of labour is offered for hire at different wage rates. The higher the wage rate, the longer the supply of labour hours will be. However, there may be exceptions to this rule (which is known as exceptional supply).

The supply of labour can be affected by the *work-leisure ratio* as illustrated in Figure 2.15.

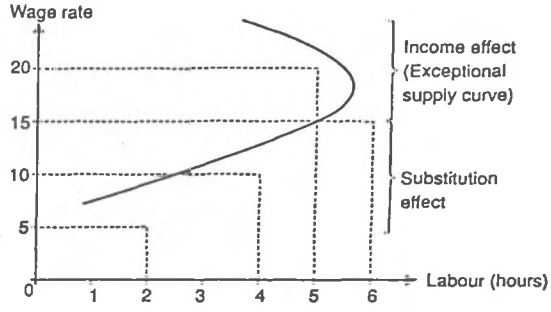


FIGURE 2.15 Supply of Labour Affected by Work-Leisure Ratio

Explanation of the above diagram

- A labourer will spend 24 hours of his day either on work or on leisure. His non-working hours (earning income) will be considered his *leisure time*. The oppportunity cost of working is to forgo the hours of leisure.
- An increase in wage rate may encourage substitution of leisure for work and encourages the worker to put in additional hours as his wages are higher now. This is called the *substitution effect* of an increase in wage rate. Supply of labour will shift upwards to the right as shown in Figure 2.15.
- Workers will increase their hours of work if wage rates are high. After a certain number of hours, workers are unwilling to substitute their leisure for work. Although higher wage rates may be offered, workers view their leisure as important. This is called the *income effect* of an increase in wage rate.

- *The supply of labour curve does not slope upward throughout its entire length but begins to bend back on itself at one point. This is what we call as the 'Backward Bending Supply Curve'*

Substitution Effect

The higher the wage rate, the more people will economize on their non-market activities and *increase their work hours*. For example, if David is given additional pay on the extra hours he works, he will reduce his leisure hours and substitute them with work.

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Income Effect

A higher income induces an increase in demand for leisure. So, less time is spent on work and there is a decrease in the *the quantity of labour supplied*. For example, if David has enough money, additional pay will not encourage him to increase his work hours above the normal 8 hours. He will wish to spend his money on leisure activities. Therefore, an increase in income will reduce the labour supplied.

ELASTICITY OF SUPPLY

Price elasticity of supply measures the sensitivity or responsiveness of the quantity supplied due to a change in the price of a product or service.

TIP BOX

Same concept as in demand

Formula

$$\text{Price elasticity of supply} = \frac{\%\ \Delta \text{ in quantity supplied}}{\%\ \Delta \text{ in price}}$$

$$= \frac{\Delta Qs/Qs \times 100}{\Delta P/P \times 100}$$

$$= \frac{\Delta Qs}{Qs} \times \frac{P}{\Delta P}$$

$$\varepsilon_{ss} = \frac{Q_2 - Q_1}{Q_1} \times \frac{P_1}{P_2 - P_1}$$

Price elasticity of supply
Measures the sensitivity or responsiveness of the quantity supplied due to a change in its price.

Example

Question

If the price of shoes increases from RM20 to RM30 and the quantity supplied increases from 40 to 50 units, calculate the price elasticity of supply.

Solution

$Q_1 = 40$; $Q_2 = 50$; $P_1 = 20$; $P_2 = 30$.
(Fill up the figures into the formula)

$$\varepsilon_{ss} = \frac{Q_2 - Q_1}{Q_1} \times \frac{P_1}{P_2 - P}$$

$$= \frac{50 - 40}{40} \times \frac{20}{30 - 20}$$

$$= \frac{10}{40} \times \frac{20}{10} = 0.5$$

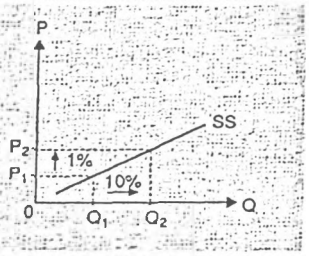
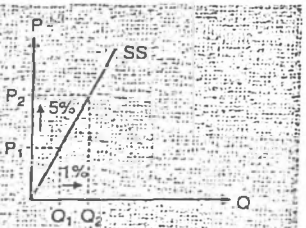
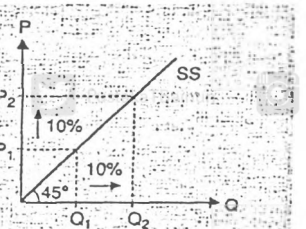
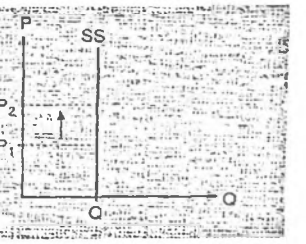
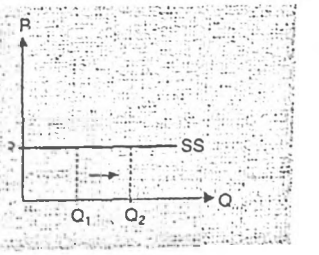
Degree of Elasticity

The degree of supply elasticity is the same as in the case of demand. Table 2.9 summarizes the elasticity of supply. For more details, refer to the demand explanations.

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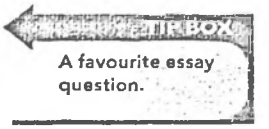
TABLE 2.9 Summary of Elasticity of Supply

Elasticity of Coefficient	Terms	Means	Diagram
$\varepsilon_{ss} > 1$	Elastic Supply	*Small percentage change in price will lead to a larger percentage change in quantity supplied.*	
$\varepsilon_{ss} < 1$	Inelastic Supply	*Large percentage change in price will only affect a small percentage of the quantity supplied.*	
$\varepsilon_{ss} = 1$	Unitary Elastic Supply	*Percentage change in price equals the percentage change in quantity supplied.*	
$\varepsilon_{ss} = 0$	Perfectly Inelastic Supply	*A percentage change in price has no effect on the percentage change in quantity supplied.*	
$\varepsilon_{ss} = \infty$	Perfectly Elastic Supply	*An almost zero percentage change in price brings a very large percentage change in the quantity supplied.*	

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Determinants of Price Elasticity of Supply



1 Technology improvements

Modern methods of production expand output and hence supply tends to be elastic. Number of outputs produced in a given period of time is lower when old methods of production are used.

2 Time period

Time has a great influence on the elasticity of supply compared to demand.

In the short term, supply tends to be *inelastic.* This is due to insufficient availability of time to organize and adjust supply to demand. For example, agricultural products.

However, in the long term, supply is more elastic. Sellers are more responsive to changes in price since they can adjust their supply or production. For example, manufacturing products.

3 Availability and mobility of factors of production

When factors of production such as land, labour and capital are available and can easily move from one occupation to another, supply tends to be *more elastic.*

4 Nature of the market

When products can be sold in different markets supply is *more elastic* because price falls in one market can be made good in other markets.

5 Perishability

There are *perishable products* like agricultural products and supply is *inelastic.* Changes in price do not affect supply much because the sellers cannot store perishable products for long periods of time. For example, fruits and vegetables.

In the case of less perishable products, like manufactured products, the supply is more *elastic.* If the seller expects a price increase in another two months, the seller may store these products for future sale. For example, cars, shoes and canned food.

Practical Importance of Price Elasticity of Supply

1 Taxation

The concept of price elasticity of supply can assist the government in formulating taxation policies. Imposition of tax on goods with inelastic supply, will not affect the supply much. However, if supply is elastic, taxes imposed will be reasonable.

2 Burden of Tax

The taxpayer and sellers in the ratio of elasticity of demand and supply will share the burden of tax imposed by the government. Therefore, knowledge of elasticity of supply is essential to sellers or producers.

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APPENDIX F

READING STRATEGIES TRAINING

TEACHER'S MANUAL

Phase 1 (Week 1)

Input {Global Reading Strategies (GLOB)}

- Read with a purpose in mind
- Think about what I know to help me understand what I read (pre-information)
- Over all view of the text to see what it's about before reading
- Decide whether the content of the text fits the reading purpose

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of the strategies. ▪ Read with a purpose in mind **Definition:** Identify the purpose of reading ▪ Think about what I know to help me understand what I read (pre-information) **Definition:** Determine the background knowledge posses ▪ Over all view of the text to see what it's about before reading **Definition:** Skim through the text in order to identify the general idea ▪ Decide whether the content of the text fits the reading purpose **Definition:** Examine if the content match the initial purpose of reading	Lecture Classroom discussion	Handout Reading Materials (Appendix D)
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and	Lecture Classroom	

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	benefit of the strategies. ▪ To give direction and allows to plan appropriate and effective strategy ▪ To help to get ready and get familiar with the content ▪ To help generating general idea out of the text.	discussion	
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	
Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where**: Pre-reading	Lecture	
Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

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Phase 1 (Week 2)

- **Input {Global Reading Strategies (GLOB)}**

- Review the text first by noting characteristics including length and organization
- Decide what to read closely and what to ignore.
- Use tables, figures, and pictures in the text to increase understanding
- Use context clues to help better understand the reading

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of the strategies. ▪ Review the text first by noting characteristics including length and organization **Definition:** Examine the features presented in the text ▪ Decide what to read closely and what to ignore. **Definition:** Select part which valuable to be read and match to the purpose of reading ▪ Use tables, figures, and pictures in the text to increase understanding **Definition:** Review the graphics features in the text ▪ Use context clues to help better understand the reading **Definition:** Compare the content with personal background knowledge to examine if it make sense	Lecture Classroom discussion	Handout Reading Materials (Appendix D)
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and benefit of the strategies. ▪ To help comprehending the content better by reviewing the graphics features ▪ To help sustaining the purposes of reading	Lecture Classroom discussion	

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	▪ To help comprehending better by relate the background knowledge with the content.		
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	
Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where:** Pre-reading and While -reading	Lecture	
Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

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Phase 1 (Week 3)

Input {Global Reading Strategies (GLOB)}

- Use typographical features like bold face and italics to identify key features
- Critically analyze and evaluate the information presented in the text
- Check understanding when coming across new information
- Guess what the content of the text is about when reading
- Check to see if guesses about the text are correct

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of the strategies. ▪ Use typographical features like bold face and italics to identify key features **Definition:** Review the text features which might signal important point. Example: Word in bold might indicate a keyword. ▪ Critically analyze and evaluate the information presented in the text **Definition:** Assess to the content ▪ Check understanding when coming across new information **Definition:** Examine if there are any new information ▪ Guess what the content of the text is about when reading **Definition:** Predict the kinds of words, phrases and information that can be expected to encounter based on background knowledge. ▪ Check to see if guesses about the text are correct **Definition:** Evaluate if the predictions are accurate	Lecture Classroom discussion	Handout Reading Materials (Appendix D)
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and	Lecture Classroom	

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	benefit of the strategies. ▪ To help assessing the appropriateness of the prediction ▪ To help comprehending the content quickly by reviewing the typological features	discussion	
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	
Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where**: Pre-reading, while- reading and post-reading	Lecture	
Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

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Phase 2 (Week 4)

Input {Problem Solving Strategies (PROB)}

- Read slowly and carefully to make sure I understand what I'm reading
- Try to get back on track when distracted or lose concentration
- Adjust reading speed according to the reading material

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of the strategies. ▪ Read slowly and carefully to make sure I understand what I'm reading **Definition:** Read thoroughly an attentively ▪ Try to get back on track when distracted or lose concentration **Definition:** Try to focus on the text ▪ Adjust reading speed according to the reading material **Definition:** Match the speed according to the importance of points	Lecture Classroom discussion	Handout Reading Materials (Appendix D)
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and benefit of the strategies. ▪ To save time and make reading less time consuming ▪ To sustain the focus of reading	Lecture Classroom discussion	
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	

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Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where:** While- reading and post-reading	Lecture	
Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

Phase 2 (Week 5)

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Input {Problem Solving Strategies (PROB)}

- When text becomes difficult, pay closer attention to the material
- Stop from time to time and think about the reading
- Try to picture or visualize information to assist in remembering

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of the strategies. ▪ When text becomes difficult, pay closer attention to the material **Definition:** Focus more when the content is getting complex ▪ Stop from time to time and think about the reading **Definition:** Take time to process the	Lecture Classroom discussion	Handout Reading Materials (Appendix D)

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	information ▪ Try to picture or visualize information to assist in remembering **Definition:** Use imagination to relate with the content		
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and benefit of the strategies. ▪ To help reader processing the text effectively ▪ To help reader to create personal association with the content	Lecture Classroom discussion	
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	
Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where**: While- reading	Lecture	
Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

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Phase 2 (Week 6)

Input {Problem Solving Strategies (PROB)}

- When text becomes difficult, re-read to increase understanding
- When reading, guess the meaning of unknown words or phrases

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of the strategies. ▪ When text becomes difficult, re-read to increase understanding **Definition:** Repeat the reading process in order to comprehend better ▪ When reading, guess the meaning of unknown words or phrases **Definition:** Predict the meaning using clues in the sentence.	Lecture Classroom discussion	Handout Reading Materials (Appendix D)
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and benefit of the strategies. ▪ To help comprehend better by looking closely at the content ▪ To help reader to fasten the reading process	Lecture Classroom discussion	
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	
Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where:** While- reading	Lecture	

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Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

Phase 3 (Week 7)

Input {Support Strategies (SUP)}

- Take notes while reading to assist in understanding the text
- When text becomes difficult, read aloud to assist in understanding

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of the strategies ▪ Take notes while reading to assist in understanding the text **Definition:** Extract important information and write it down ▪ When text becomes difficult, read aloud to assist in understanding **Definition:** Vocal out the reading process	Lecture Classroom discussion	Handout Reading Materials (Appendix D)
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and benefit of the strategies.	Lecture Classroom discussion	

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	▪ To help in memorizing the details ▪ To help reader in reassuring the details of reading		
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	
Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where**: While- reading	Lecture	
Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

Phase 3 (Week 8)

Input {Support Strategies (SUP)}

- Underline or mark-up information in the text to assist in remembering
- Use reference materials (dictionaries, etc.)

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of	Lecture Classroom	Handout Reading Materials

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	the strategies ▪ Underline or mark-up information in the text to assist in remembering **Definition:** Underline important points ▪ Use reference materials (dictionaries, etc.) **Definition:** Referring to additional material (materials, glossary @ footnote in order to check the meaning of difficult words	discussion	(Appendix D) Dictionary
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and benefit of the strategies. ▪ To help in memorizing the details ▪ To help reader in comprehensing difficult words	Lecture Classroom discussion	
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	
Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where:** While- reading	Lecture	
Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

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Phase 3 (Week 9)

Input {Support Strategies (SUP)}

- Paraphrase/restate to better understand
- Go back and forth in the text to find relationships among ideas
- Ask self questions to find answers in the text

Stage	Input	Activities	Materials
Stage 1	What the strategy is? Teacher defines and explains the features of the strategies ▪ Paraphrase/restate to better understand **Definition:** rewrite or restate the points in own words ▪ Go back and forth in the text to find relationships among ideas **Definition:** Scan for important idea all over the text ▪ Ask self questions to find answers in the text **Definition:** Ask question in order to seek for clarification	Lecture Classroom discussion	Handout Reading Materials (Appendix D) Dictionary
Stage 2	Why a strategy should be learned? Teacher explain the purposes, importance and benefit of the strategies. ▪ To help strengthen understanding ▪ To locate important ideas ▪ To confirm any uncertaities about the idea	Lecture Classroom discussion	
Stage 3	How to use the strategy? Teacher explains the strategies clearly and illustrates the logical relationships among the various strategies.	Teacher modelling	

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Stage 4	When and where the strategy should be used? Teacher explains how to organized the used of reading strategies according to circumstances. **When and where**: While- reading and post-reading	Lecture	
Stage 5	How to evaluate use of the strategy. Teachers demonstrate to students on how to evaluate their successful/unsuccessful use of the strategy, including suggestions for fix-up strategies to resolve remaining problems.	Classroom discussion	
Note	Teacher will refer to reading text (appendix D) in order to show examples and model the strategies.		

Phase 4 (Week 10-12)

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Stage	Input	Activities	Materials
	▪ **Reviewing the three strategies and reading practice**	Classroom discussion Individual practice	Reading Materials (Appendix D)

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APPENDIX G

READING STRATEGIES TRAINING

STUDENTS HANDOUT

PHASE 1 (WEEK 1)

INPUT

What is reading strategies?

Reading strategies are those mental processes that reader consciously chooses to use in accomplishing reading task (Cohen, 1990).

Global Reading Strategies

Definition: Global reading strategies are intentional, carefully planned techniques by which learners monitor or manage their reading process.

- Read with a purpose in mind

Definition: Identify the purpose of reading

- Think about what I know to help me understand what I read (pre-information)

Definition: Determine the background knowledge posses that related to the content

- Over all view of the text to see what it's about before reading

Definition: Skim through the text in order to identify the general idea

- Decide whether the content of the text fits the reading purpose

Definition: Examine if the content match the initial purpose of reading

Why the strategies should be learned?

- To give direction and allows to plan appropriate and effective strategy
- To help to get ready and get familiar with the content
- To help generating general idea out of the text.

When and where to use the strategies?

Pre- reading

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PHASE 1 (WEEK 2)

Global Reading Strategies

- Review the text first by noting characteristics including length and organization

Definition: Examine the features presented in the text

- Decide what to read closely and what to ignore.

Definition: Select part which valuable to be read and match to the purpose of reading

- Use tables, figures, and pictures in the text to increase understanding

Definition: Review the graphics features in the text

- Use context clues to help better understand the reading

Definition: Compare the content with personal background knowledge to examine if it makes sense

Why the strategies should be learned?

- To help comprehending the content better by reviewing the graphics features
- To help sustaining the purposes of reading
- To help comprehending better by relate the background knowledge with the content

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When and where to use the strategies?

Pre-reading and while reading

PHASE 1 (WEEK 3)

Global Reading Strategies

- Use typographical features like bold face and italics to identify key features

Definition: Review the text features which might signal important point. Example: Word in bold might indicate a keyword.

- Critically analyze and evaluate the information presented in the text

Definition: Assess to the content

- Check understanding when coming across new information

Definition: Examine if there are any new information

- Guess what the content of the text is about when reading

Definition: Predict the kinds of words, phrases and information that can be expected to encounter based on background knowledge.

- Check to see if guesses about the text are correct

Definition: Evaluate if the predictions are accurate

Why the strategies should be learned:

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- To help assessing the appropriateness of the prediction
- To help comprehending the content quickly by reviewing the typological features

When and where to use the strategies?

Pre-reading, while reading and post-reading

Phase 2 (Week 4)

Problem Solving Strategies (PROB)

Definition: Problem solving strategies are the activities and procedures that readers use while working directly with the text.

- Read slowly and carefully to make sure I understand what I'm reading

Definition: Read thoroughly an attentively

- Try to get back on track when distracted or lose concentration

Definition: Try to focus on the text

- Adjust reading speed according to the reading material

Definition: Match the speed according to the importance of points

Why the strategies should be learned?

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- To save time and make reading less time consuming
- To sustain the focus of reading

When and where to use the strategies?

Pre-reading and while reading

Phase 2 (Week 5)

Input Problem Solving Strategies (PROB)

- When text becomes difficult, pay closer attention to the material

Definition: Focus more when the content is getting complex

- Stop from time to time and think about the reading

Definition: Take time to process the information

- Try to picture or visualize information to assist in remembering

Definition: Use imagination to relate with the content

Why the strategies should be learned?

- To help reader processing the text effectively
- To help reader to create personal association with the content

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When and where to use the strategies?

Pre-reading and while reading

Phase 2 (Week 6)

Input Problem Solving Strategies (PROB)

- When text becomes difficult, re-read to increase understanding

Definition: Repeat the reading process in order to comprehend better

- When reading, guess the meaning of unknown words or phrases

Definition: Predict the meaning using clues in the sentence.

Why the strategies should be learned?

- To help comprehend better by looking closely at the content
- To help reader to fasten the reading process

When and where to use the strategies?

Pre-reading and while reading

Additional Note

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<u>Guessing meaning in context</u>

- <u>1. Definition</u>

  A definition gives the meaning of words. The writer may use words, phrases, or statements to define something. The writer will use key words, or signal words to identify a definition so you need to look for them. See examples of key words below.

  Key words :

  is/are *means/mean* *is/are called* *what this means is* *is/are known as*
  consist of is/are *defined as* *refer to* *is/are described as*
  may be seen as

  e.g.

  1. <u>Inflation</u> is a rise in the general level of prices you pay for things you buy.

  an unfamiliar word = *inflation*
  signal word = *is*
  the definition = *a rise in the general level of prices you pay for everything you buy.*

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- 2. Restatement

The writer may use other words, phrases, or sentences to provide the meaning of difficult words. We call this restatement; the writer describes it again or in a different way. Signal words for restatement are:

Key words

Or that is to say in other words i.e. that is

e.g.

2. The surface of Africa consists mainly of plateaus, or large flat areas, although these occur at different levels.

an unfamiliar word = *plateaus*
signal word = *or*
meaning = *large flat areas*

- 3.Examples

Examples help us to understand the meaning of new words. See key words or signal words used for showing examples in the "Key words box".

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Key work

such as like for example ... for instance is / are

3. The Savanna grasslands are the home of grazing animals such as elephants, giraffes, antelopes and zebras. Lions, leopards and hyenas also live there.

a) non-backbone animals b) meat-eating animals

c) invertebrate animals d) grass-eating animals

- **Surrounding words**

If you cannot find any signal words or key words as stated before, you may look around new words or unfamiliar words and try to guess them. The surrounding words may help you to understand the new words. See examples below.

-

e.g. Children are too young to understand that swallowing gum can cause medical problems and so they shouldn't be allowed to chew it, doctors say.

- unfamiliar words: *swallowing and chew*
What do these words mean?
How do you guess their meaning?

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- Meaning : to eat , to consume, to ingest

Phase 2 (Week 7)

Input Problem Solving Strategies (PROB)

- Take notes while reading to assist in understanding the text

Definition: Extract important information and write it down

- When text becomes difficult, read aloud to assist in understanding

Definition: Vocal out the reading process

Why the strategies should be learned?

- To help in memorizing the details
- To help reader in reassuring the details of reading

When and where to use the strategies?

While reading

Additional Note

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Forms of Note-Taking

- Outlining

  I. Topic sentence or main idea
  II. Major points providing information about topic
  III. Sub point that describes the major point
  IV. Supporting detail for the sub point

- Patterning: flowcharts, diagrams
- Listing, margin notes, highlighting

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Phase 3 (Week 8)

Input Support Strategies (SUP)

- Underline or mark-up information in the text to assist in remembering

Definition: Underline important points

- Use reference materials (dictionaries, etc.)

Definition: Referring to additional material (materials, glossary @ footnote in order to check the meaning of difficult words

Why the strategies should be learned?

- To help in memorizing the details
- To help reader in comprehending difficult words

When and where to use the strategies?

While reading

Phase 3 (Week 9)

Input Support Strategies (SUP)

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- Paraphrase/restate to better understand

Definition: rewrite or restate the points in own words

- Go back and forth in the text to find relationships among ideas

Definition: Scan for important idea all over the text

- Ask self questions to find answers in the text

Definition: Ask question in order to seek for clarification

Why the strategies should be learned?

- To help strengthen understanding
- To locate important ideas
- To confirm any uncertainties about the idea

When and where to use the strategies?

Pre-reading and while reading

Phase 4 (Week 10-12)

- **Reviewing the three strategies and reading practice**

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