## The University of Hull

# The Assessment of Comprehension Skills and Development of a Programme for Enhancing Comprehension Skills for Fourth Grade Students in the State of Qatar 

## Being a Thesis Submitted for the Degree of Doctor of Philosophy in the University of Hull

## By

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## DEDICATION

I want to dedicate this thesis to my entire family. To my mother because of her unending love and support through my entire life that I am who I am today. To my sister because of her encouragement and of taking care of my children during my study. To my three children, Abdullah, Latifa and Noor. How many times they have to put up with me being far from them.

And of course, how can I express my thanks to my life-long best friend and most zealous supporter, my husband, Rashid. There are no words that can express how grateful I am for all he has done for me.

To all of you, I dedicate this work with love to you all.

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#### Abstract

This study aimed to explore the reading comprehension learning needs of fourth grade pupils in Qatar; to identify and test assessment techniques that may be helpful in studying reading comprehension; and to investigate the effects on reading comprehension of a metacognitive teaching programme.

Exploratory interviews with fourth grade teachers showed that they focus on pronunciation, word-recognition and grammar. Pupils are not taught the strategies of comprehension and thinking while they read. A need was identified for innovative assessment activities and interventions to enhance reading comprehension skills.

A quasi-experimental research design was chosen to investigate the effect of a metacognitive teaching programme in which two groups of pupils were compared on various measures of comprehension performance, including reading self-awareness and strategy use before and after a three month teaching programme: the standard Qatar reading programme for the control group and the Reading and Thinking Strategy programme for the experimental group.

Reading comprehension was measured by a comprehension test and cloze test developed by the researcher. Strategy use and reading awareness were assessed by think-aloud tasks, the Index of Reading Awareness (Paris, Cross and Lipson, 1984), a Self-perception scale (Henk and Melrick, 1998) and metacognitive interviews. The reliability and validity of all measures were tested with classes of $4^{\text {th }}$ grade pupils from three randomly selected schools in Qatar. The reading strategy programme was applied in a single school selected from among the three that had been involved in piloting the instruments. Valid, usable data was collected from 64 pupils: 31 in the control and 33 in the experimental group.


The experimental group made significantly greater gains over all measures than the control group in association with the intervention showing the effectiveness of the metacognitive approach. The significant gains in reading awareness experienced by the experimental group extended to individual strategies: evaluation, planning, regulation and conditional knowledge. The metacognitive interviews and think-aloud protocols supported these findings. Following the intervention, the experimental group made more use than the control group of evaluation, selfquestioning, monitoring and planning, and unlike the control group, used strategies in combination. It is concluded that, by training pupils in metacognitive skills, teachers can improve reading comprehension and help them to become active learners in the reading process.

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## CHAPTER ONE

## INTRODUCTION OF THE STUDY

### 1.1 Introduction

This chapter outlines the whole study in terms of the aim of the study and significance of this aim. It also outlines the importance of reading comprehension in general and its significance for Qatar and for the researcher. This chapter also presents definitions of the key terms used in this study. It finally concludes with the key research questions.

### 1.2 Focus of the Study

The ultimate aim of the present study was to investigate the effects of a metacognitive teaching programme for fourth grade Arab pupils in Qatar on their reading comprehension. Qatari children start school with grade one of the elementary cycle at the age of six years. One teacher (called the class teacher) teaches all the subjects of each grade of the first four grades in this cycle. Pupils learn Islamic Education (basics of Islam and recitation of short verses of Holy Qura'an, the Prophet's sayings and preachings), Arabic, science, maths, geography and history. At grade four pupils start learning reading comprehension of short texts with texts-based exercises, such as completion, matching and reordering simple sentences. The reasons for carrying out this study with fourth grade pupils are: (1) Research (Chall 1983) has shown that pupils who do not "learn to read" during the first three years of school experience enormous difficulty when they are subsequently asked to "read to learn." Teaching pupils to read by the end of third grade is the single most important
task assigned to elementary schools. During the first three years of schooling, pupils "learn to read." That is, they develop the capacity to interpret the written symbols for the oral language that they have been hearing since birth. Starting in fourth grade, schooling takes on a very different purpose, one that in many ways is more complex and demanding of higher-order thinking skills. If, by this time, pupils do not develop efficient reading skills, language, history, mathematics and science become inaccessible. (2) Fourth-grade pupils have already learnt the vocabulary and grammatical forms needed to read longer written passages. (3) According to Chall (1983) the fourth-grade age is the point of transition from 'learning to read' to 'reading to learn'. This is often considered the point where the rate of progress in reading begins to decline. (4) As well as that, the researcher believes that Arab pupils should be taught the procedures of how flexibly to apply metacognitive strategies to reading comprehension. Arab teachers should know how to plan for strategy teaching. It was hoped that this programme could be used by curriculum developers for future educational reform plans, and by education supervisors and school teachers for planning to reinforce and/or remedy the reading comprehension difficulties in Qatar.

### 1.3 Importance of Reading Comprehension

Learning to read is an important objective that pupils have to accomplish in elementary school because it is the foundation for most of their future academic endeavour. From the middle elementary years through the rest of their lives as pupils, pupils spend much of their time reading and learning information presented in text. The activity of reading to learn requires pupils to comprehend and recall the main ideas or themes presented in an expository text (Steven, Slavin, and Marie, 1991). The ultimate goal of reading instruction is for pupils to obtain meaning from what they read. As they advance up the grades, pupils are expected to read for pleasure
and to read for content. These expectations require the pupil to understand different types of text, to read for different purposes, and to bring to the printed page background knowledge or experience from which meaning may be constructed (Carnine, Silbert, and Kameenui, 1990).

Good readers, then, read fluently and with expression; moreover, they comprehend what they read (Meese, 1994). Traditionally, a teacher in a regular classroom teaches reading comprehension through a directed reading activity or a directed reading-thinking activity. That is, the teacher sets the purpose for reading, or elicits a purpose from student predictions, and then follows reading with questions.

As reading comprehension requires pupils to understand the meaning of what they read, they often read the word as well as the sentence, but they do not comprehend the content of the paragraph, the phrase or the story. Such comprehension is one of the most important skills on which the reading process is based (Taylor, Harris and Pearson, 1988). In order to comprehend thoroughly, a pupil should realise the relationship between the sentences, the purpose of reading comprehension, and have the ability to gather meaning from the text. Comprehension involves both the knowledge a pupil brings to a reading selection and his or her understanding of the varied types of text and purposes for reading.

Hence, comprehension in reading is not only limited to language as a skill to be mastered, but it is also a skill to learn about information, understand the meaning of a text, and further study skills. Learners use it for comprehending maths, geography, history, religious education lessons, etc. It is also used to understand texts in newspapers, magazines and other media. Mastering these skills would help learners to be efficient in other areas of study and future in their careers.

The recognition that comprehension is the ultimate reading ability has encouraged research into theoretical comprehension models, practical materials, procedures and strategies for classroom use in the improvement of reading
comprehension. It has been noted that the more teachers work on reading comprehension, the more they realise the need to increase readers' control of their own strategies (cognitive approach) instead of the teacher trying to control all improvements (Johnston, 1985).

Once learners have developed the ability to recognise if they do or do not understand text, they can then use strategies to help them understand. During the teaching of metacognition, the responsibility for monitoring learning and comprehension is transferred from the teacher to the pupils (Paris and Ayres, 1994).

In the light of this preliminary overview, it is proposed to carry out an experimental study on the introduction of metacognitive reading comprehension strategies with a view to improving pupils' reading comprehension abilities.

### 1.4 Importance of Reading Comprehension in Qatar

Qatar is considered a rich country, hence it tries to keep up with modern developments in every aspect of life to meet the people's needs for improving the standards of living, education, technology, etc. Learners in Qatar are like any other learners elsewhere in terms of educational prospects, objectives, needs and difficulties. Because Qatari pupils can have access to modern technology involving information gathering and communication, they are required to be effective readers not only in Arabic as school subject matter, but also in reading comprehension of texts in other aspects of education. In Qatar, reading comprehension is taught at the elementary stage through the school subject of Arabic, as it is the native language of the people and the medium of instruction.

Through observations, it is noticed among educators that elementary pupils are efficient readers in Arabic in general and in other subjects in particular (Ministry of education, 1999). The Ministry of Education in Qatar (MOE) puts great effort into
improving educational processes with the objective of raising the education outputs. This is discussed in more detail in chapter 2.

Qatari Educators (Ministry of Education, 1998) mention that the fourth elementary graders are normally taught reading comprehension as a minor part of the Arabic language skills, with concentration on reading ability, speed and correct pronunciation of words.

It is expected that Qatari pupils of grade four should be able to comprehend the texts they read. Thus, according to Shahata (1993) and the Ministry of Education (1999) they should be equipped with the following essential abilities:

1) Understand the main ideas of the passage.
2) Simple recalling of what $\mathrm{s} / \mathrm{he}$ has read.
3) Understanding words' meanings.
4) Organising elements in the material being read.
5) Reasoning.
6) Remembering what has been read.
7) Reading properly and executing instructions.
8) Skimming and scanning which include the child's ability to recognise quickly the main points, link them with each other and remember them.

The Ministry of Education in Qatar places strong emphasis upon teaching the Arabic language at the elementary level. In an elementary school's timetable, 30\% of the time is devoted to the teaching of Arabic. In language teaching, about $30 \%$ is spent on teaching reading, on the assumption that doing so will increase pupils' ability to master and understand the materials they read (Ministry of Education, 1998). Through the review of the related literature, it was noticed that there are no effective strategies or procedures that can be taken or followed to enhance understanding as an independent subject rather than as one of the Arabic language skills. (These Arabic language skills are recognition of word meaning and
pronunciation, word formation, spelling and dictation, reading words, phrases and short sentences, writing including copying, and memorisation of short poems) (Eids, 1996).

In order to probe the situation of teaching Arabic in general and reading comprehension in Qatar in particular, exploratory interviews with the educators, teachers and education supervisors of Arabic will be conducted. These interviews will help the researcher develop an idea about the problems of reading comprehension in Qatar and explore how reading comprehension is taught and assessed (see chapter five).

### 1.5 Definition of the Key Terms, Issues and Procedures Used in this Study <br> For the purpose of this study, the following definitions are used:

### 1.5.1 Reading

Reading is a complex process during which the reader links and integrates a variety of information derived from the reader's mind, the written text, and illustration if available. The reader recognises the printed words in order to access to their lexicons and know their meanings. The reader brings prior knowledge to the text he /she is reading, and this process helps in recognising the words that follow. This stage of word-recognition skills develops as the child's reading ability develops (Harris \& Sipay, 1990). Reading involves basic decoding and phonics, understanding of meaning, and interpretative skills.

### 1.5.2 Reading Strategies

Reading strategies are the preference, use, and management of specific strategies (such as planning, self-questioning, skimming, rereading, and evaluation) to enhance comprehension, memory and enjoyment of text (Paris and Ayers, 1994).

### 1.5.3 Reading Comprehension

Reading comprehension refers to understanding the meaning of what is read. It is composed of word recognition and understanding, i.e. the pupil recognises the words in order to understand the meaning. The word recognition requires the pupil to learn to link between printed codes and their meanings. These meanings should be clear and accurate. The pupils should also be able to choose the correct meaning of the word in accordance with context (Lipson and Wixson 1991; Lerner, 1993). Comprehension also depends upon the pupil's motivation and basic background in the concepts and skills of word cognition, in addition to the ability of thinking (McCombs and Whisler 1997).

### 1.5.4 Metacognition:

" Thinking about thinking," or knowledge related to self-appraisal and selfregulation of one's thinking and actions (Paris and Ayers, 1994)

### 1.6 Research Questions

This study aimed to answer the following questions:

1) What are the comprehension learning needs of fourth grade pupils in Qatar and how can they be addressed?
2) What assessment techniques may be helpful in understanding reading comprehension?
3) Does the Reading and Thinking Strategies programme adopted in this study affect pupils' performance on reading comprehension?

The first question concerning comprehension learning needs will be addressed by the exploratory phase of the study (chapter five): the second question concerning assessment techniques will be addressed within the pilot study phase of the study (chapter 6), and the final question will be addressed by the full study (results in chapter 7 and discussion in chapter 8).

## CHAPTER TWO

 BACKGROUND OF THE RESEARCH PROBLEM
### 2.1 Introduction

This chapter outlines the geography and history of Qatar as well as the education system and structure. It also discusses the nature and components of language in general and the teaching of Arabic in particular considering its nature, development, components and characteristics and the teaching of reading comprehension. It then describes the context of teaching reading and reading comprehension in Arabic in Qatar.

### 2.2 Geography and History of Qatar

The State of Qatar has been an independent emirate since 3 September 1971. Its population is 534,000 in an area of $11,400 \mathrm{sq} . \mathrm{km}$, on a largely barren peninsula in the Arabian Gulf, bordered by Saudi Arabia and the United Arab Emirates in the south. The capital is Doha. A minority (25\%) of the population is Qatari (Arabs of the Wahhabi sect of Islam); the rest are largely Pakistanis, Indians, Iranians and other Arabs. Arabic is the official language, but English is also widely spoken.

The economy of Qatar is dominated by oil, which accounts for over $90 \%$ of exports and government income. Oil revenues have been used to diversify the economy, including the development of natural gas fields, chemicals, iron and steel, cement, and fertiliser industries and banking. Qatar is a traditional monarchy. A provisional constitution enacted in 1972 called for elections to the 35 -seat advisory council (Shura) whose members continue to be appointed by the ruling family. The current emir, Sheikh Hamad bin Khalifa al-Thani, has worked to democratise the
political structure, however, and in 1999 the first-ever elections were held for a municipal council; women have the right to vote.


Qatar has had a long history since the Stone Age. After the rise of Islam in the 7th century A.D. it became part of the Islamic Caliphate, and later of the Ottoman Empire. In the late 18 th century, it became subject to Wahhabis from the region of present-day Saudi Arabia who were later supplanted by the Al Thani dynasty. During the Ottoman period from 1871 to 1913 , senior members of the Al Thani family were named deputy governors; subsequently, Qatar became a British protectorate, with Abdullah bin Jassim al-Thani recognized as Sheikh. In 1971, Qatar became independent of Great Britain. Since then the Al-Thani family has governed the country. In 1981, Qatar joined neighbouring countries in the formation of the Gulf Co-operation Council (GCC) to strengthen economic relations among the participating nations(http://www.arab.net/qatar_contents.html).

### 2.3 Education in Qatar

The Ministry of Education (MOE) was established in 1956 when the education system was started in three stages: Primary for six years; preparatory for three years and secondary for another three years. The system is centralised; the MOE provides all general and specialised types of education. It also offers adult and literacy programmes as well as special classes for the pupils with disabilities. The MOE provides all the schools with textbooks and teaching materials, and stationery (URL: www.arabnet.qatar/education, 2001).

The philosophy of Education in Qatar is based on the Islamic religion and the national constitution, taking into account the cultural and social traditions of the society. According to the MOE decree number 48 (Ministry of Education, 2000), the general goals of education are to:

1) Enable learners to master the basics of learning (reading, writing and maths)
2) Enable learners to become acquainted with knowledge, advanced sciences, and scientific research and exploration.
3) Enhance methods of self-learning and on-going education.
4) Equip learners with skills of self-expression in various ways.
5) Develop learners' abilities in creativity, invention and scientific thinking and application.
6) Develop learners' abilities by providing an educational environment suitable for improving their talents and performance.
7) Identify learners with special needs and equip them to take part in their community.

### 2.4 The Structure of Education in Qatar

Education is organised into three stages as follows (Ministry of Education, 2000):

1) Pre-school is available to every child aged between $4-6$ years through kindergartens which are mostly owned and run by the private education sector but supervised and controlled by the MOE. The curricula and licensing are approved by the MOE. This stage aims to prepare children for schooling by developing their abilities, motivation and readiness for learning and their psychological, and physical aspects of personality.
2) Compulsory School Education includes the elementary and preparatory stages. It extends from grade one at six years of age up to grade nine at age 14 years. It is free of tuition fees to all students and schools are provided with all the equipment and facilities needed. The MOE emphasises that curricula for these two stage are to be integrative and sequential, coherent and developed with consideration of the learners' nature, subject matter and societal needs. These curricula should be functional, related to life situations, enhancing self-exploratory and experimentation skills and opening opportunities for discussion, analytical thinking and practical application. As for the first four grades of the elementary stage, the active and productive experiences are to be taught by integrating theoretical and practical knowledge through various instructional materials.
3) The secondary stage covers grades 10,11 and 12 . It comprises various streams of education, to take account of pupils' different abilities and aptitude to meet the changing socio-economic and cultural requirements. It provides all secondary stage students with common background of basic subjects. To meet students' abilities and future study plans, specialised subjects and elective subjects are offered. Then, they can join the university or the labour force.

In respect of Special Educational Needs (SEN), the MOE has started recently to establish special schools to meet the increasing demands of both talented pupils and those who have learning difficulties. Special programmes are to be developed to
meet the different needs and the individual differences of these pupils. Therefore, the reading programme tested in the present study could be useful for such schools as well as for pupil in ordinary schools; it might be helpful to those who face difficulties in reading comprehension in addition to meeting needs of other learners. Pupils with specific reading difficulties in Qatar do not receive any special programmes in special schools. They are often educated in ordinary schools without any extra help.

The subsequent sections discuss the nature, components and varieties of language in general and of Arabic in particular, focusing on key issues related to its development, components and characteristics specifically.

### 2.5 Language Nature, Components and Varieties

Generally speaking, language is viewed as an instrument of thought, a form of behaviour or a system of arbitrary signs. However, the term 'language' has multiple definitions. It has been recognised that the components of language are Phonetics (sounds of languages); Morphology (structure of words), Syntax (structure of phrases and sentences) and Semantics (study of meaning) (Mackey, 1965). These components obviously have implications for the language and its learning/teaching methods.

A number of linguistic fields study the relations between language and the subject matter of related academic disciplines, such as sociolinguistics and psycholinguistics.

The present study views language as a pure subject, linguistic competence, individual language and pedagogic matter. It is a vehicle for the expression or exchanging of thoughts, concepts, knowledge and information.

Language has several forms: standard, dialect, colloquial and slang, which are discussed briefly below.

### 2.5.1 Standard language

This is the formal literary form of language. Linguists, however, consider the standard language to be simply one dialect of a language. For Arabic Language (AL) 'standard' Arabic is considered as one dialect of Arabic, but since the rise of Islam and the holy Qura'an at the end of the sixth century, it has been recognised as standard; also, for historical/cultural reasons, it is recognised as the language of the Islamic cultural heritage (Vida 1996).

### 2.5.2 Dialect

This is a variety of language spoken by a group of people. Linguists have applied the term 'dialect' to geographically distinct language varieties (Comrie, 1996). In ordinary usage in the Arabic literature, the term dialect signifies a variety of languages that is distinct from what is considered the standard form of that language. There were many dialects known and used by the Arabs, such as Almutharaih, Hemyaraih and many more, which were associated with large Arab tribes. Recently, some dialects are known to signify particular areas, for instance Bedouin, rural or urban areas.

### 2.5.3 Colloquial language

This term applies to ordinary or familiar conversation, not formal or literary language use (Oxford Dictionary, 1996). In the case of Arabic language, the terms dialect and colloquial are commonly regarded as synonymous.

### 2.5.4 Slang

This usually refers to words, phrases, and very informal uses often restricted to special contexts or a specified profession, class, etc. (Oxford Dictionary, 1996).

Regarding the level or varieties of language, it should be noted that the gap between standard and colloquial Arabic is remarkable. Uneducated speakers of some Arabic dialects might be incomprehensible to speakers of others.

The following section reviews the teaching of Arabic in general terms of its development, components and its situation in the state of Qatar.

### 2.6 Overview of Teaching of the Arabic Language

Generally speaking, the Arabic pedagogy concentrates on syntax more than any other aspect. It seems to the researcher that this is a traditional problem, since a quick look at the Arabic Language (AL) pedagogical literature reveals that a great deal of it is concerned with syntax. The major aspects of the Arabic teaching situation are described in the following sections:

### 2.6.1. The Development of the Arabic Language

Standard Arabic, which is now the medium of education and literary activities throughout the Arab countries has its roots in classical Arabic, which can be traced back to that branch of Semitic languages called Northern Arabic. (AlMubarak: 1972 and Robert 1987)

There were a few non-Semitic forms which had entered the language and were used frequently; such as the word 'siratt' 'straight way', which was used as 'qistas' 'what is just or right', and 'firdaws' 'paradise', which were considered Persian, or just of non-semitic origin. With the exception of a few such borrowings, the Arabic Language remained unchanged.

The dissemination of Islam to neighbouring countries such as Iraq, Sham (the area now known as Syria, Jordan, Lebanon and Palestine) and Egypt affected the Arabs' interests, values and new social conventions, so the Arabic language became unified and dominated those countries' languages such as Persian, Roman (Latin) and Coptic. This situation required new words and expressions to describe
administrative structures, e.g. Emir, Khalifa and Wali, In addition, collections of poems were written, and names for some military equipment were created.

When the Abbasid era started, Arab links with other nations such as the Persians, Indians, and Greeks increased and new academic disciplines were introduced such as philosophy, medicine, mathematics and astronomy etc. This situation brought to the Arabic language scientific and technical words and terms in those different fields. Also, new and unfamiliar ways of expression were introduced such as Greek expressions which use negation connected with a noun, such as unconsciousness and incomprehension. (Al-Mubarak: 1972; Peters and Habeeb 1996).

Arab linguists started to collect, record and classify words to understand the Holy Qura'an and explain its expressions. In the Abbasid era, the focus was on explanation and deduction of rules and language codes. In the next era, which started in the second Hijri century, grammar and language books appeared, such as Sibawayhe's book in 180 After Hijri, a major text on grammar and deduction by Alakhfash (221 After Hijri), a discussion of reversal substitution and deduction by Al asma'ae ( 214 After Hijri), and a book on the formation and inflection of words by Mazny (249 After Hijri). (Al-Mubarak: 1972 and Matar, 1985).

Language research developed until it reached a high level in the late fourth Hijri century in works such as Ahmed Bin Fares' book 'Al saheby' on the Arabic Language philology, and Ibn Al Jeny's, 'The Characteristics'. These two authors established a clear idea about linguistics as it is known in the modern era, including general rules organising all parts of the language, i.e. more comprehensive than grammar. (Al-Mubarak: 1972).

### 2.6.2 Components of the Arabic Language

The Arabic Language is composed of twenty-nine linguistic voices represented by the Arabic letters. They are composed of three vowel points i.e. 'Fatha', 'Dhamma', 'Kasra' which are like the vowels ' $a$ ', ' $o$ ', ' $e$ '. The Arabic alphabet is as follows:
"Alef, Ba, Ta, Tha, Jeem, HHa, Kha, Dal, Thal, Ra, Zain, Seen, Sheen, Sad, Dhad, TTa, Zha, Ain, Ghain, Fa, Qaf, Kaf, Lam, Meem, Noon, Ha, Waw, Yah".

These letters and vowels compose units of sound known as voice syllables from which words are composed. The smallest unit in Arabic speech is the moving voice such as " $B a, B o$ and $B e$ " i.e. a short syllable consisting of a vowel letter which is the smallest voice unit individually pronounceable. There are also secondary long syllables in the Arabic Language, composed of one vowel and two consonants, such as: Sarr, Mar, Saqf, Hind, Roshd. These only occur in the case of pausing, whereas the long syllable is rare except in Arabic poetry. (Matar: 1985 and Kirk and Haeri 1997).

### 2.7 The Characteristics of the Arabic Language

### 2.7.1 The speech sounds

The Arabic letters are distributed in their pronunciation between the lips and palette only. So at one extreme, " $F a, B a$ " and the consonant "Waw's" are formed with the lips, while at the other, "Hha", "Ha", "Ain", "Hamza" then "Ghein" and "Kha" are graduated and pronounced from the upper to the lower part of the throat. The rest of the Arabic letters are distributed between them.

Arabic language scientists have derived some of the voice rules observed by Arabs in forming phrases from letters. For example, they avoid the combination of "Zay" with "Dha", "Seen", "Dhad" and "Thal": "Jeem" with "Qaf". "Dha", "Tah", "Ghain" and "Sad": and "Hha" with "Ha": and "Ha" before "Ain": and "Kha"
before "Ha": and "Noon" before "Raa": and "Lam" before "Sheen" (Matar: 1985; Kaye, 1987; and Kirk and Haeri 1997).

The phonetic characteristic of Arabic words is the constancy of letter sounds throughout eras and generations. The pronunciation of Arabic words as normally used in the standard language and read in the Holy Qura'an has not changed for at least fourteen centuries, or since the pre-Islamic era. Therefore, we can observe that voices, pronunciation and precision of letters in the standard language are the same in all Arab countries, though local dialects are different.

The Arabs classified speech sounds in their language on the basis of the place of articulation of these sounds. Al-Khalil ben Ahmed, a famous Arab linguist, arranged the entries of his book 'Al-ain' on the basis of their constituent letters and classified the letters on the basis of their place of articulation, starting with those produced furthest in the upper part of the mouth and proceeding towards the lips. The ' $a$ ' sound is produced in the pharynx and is called from the lips being produced in the glottis is called a 'glottal stop' and is known as the 'hamzah' in Arabic. Another property of the Arabic language is that each 'letter' in the alphabetic system refers to one 'sound'. So the pronunciation of standard Arabic is the same all over the Arab countries, in spite of the different colloquial dialects (Al-Mubarak: 1972; Bakalla,1984).

### 2.7.2 The Arabic Root-system

According to Gibb (1926), "every primary conception in the Semitic languages is expressed by means of three consonants. These three consonants form the root. Primary modifications of the meaning are expressed by internal vowel variations, secondary modifications partly by the same method and partly by affixes and inserted consonants" (Gibb 1926:7).

To illustrate Gibb's notion about the modifications of the meaning of the root as expressed by internal vowel variations, we may note that from the root ' $Q T L$ ', which consists of three consonants and conveys the idea of "killing", are formed the verb 'qatala' 'he killed', another verb 'qa:tala' 'he fought', the noun 'qatl' 'killing', the adjectival nouns 'qa:til' 'a killer' and 'qatta:l' "one who takes killing as a hobby or profession, and 'qati:l' 'one killed' with its plural 'qatla:', and a number of other derivations. Therefore, Arabic dictionaries list the entries by root rather than alphabetically, in all derivations. For instance, if we look up the meaning of the word 'maktaba' in Hans Weher's Arabic English Dictionary (edited by J M.. Cowan 1976), we must look it up under the root ' $K T B$ ', and we will find many derivations (Weher 1976: 812, 813).

Semantically, this phenomenon is interpreted as an aspect of condensation.

### 2.7.3 Development of the Arabic Lexicon

For centuries after the dawn of Islam, the Arab world has been under reforms, social interactions, and outside cultural interventions from other nations, which caused the Arabic language to resort to borrowings from other languages to meet the constant needs for development. Many classical words have become obsolete, and various new words have originated from or been associated with some other Arabic forms to express the new ideas of modern times. Words such as 'ishtirakiyya' 'socialism', 'ra'smaliyya' 'capitalism', 'diblomasiyya' 'diplomacy', 'masrif' 'bank', 'hatif' 'telephone', 'ta'ira' 'aeroplane' and 'qitar' 'train', which were never heard in Arabic (nor were used in different senses) before the rise of the present century, have now entered the lexicon of the language, with all the inflectional and derivational affixes necessary for Arabic use.

In Elias's 'Modern Dictionary, Arabic - English' (1922), we can see that all the above words (except 'rasmaliyya' and 'diblomasiyya'), can be related to certain
roots, as follows: The word 'ishtirakiyya' 'socialism' is related to the root 'SHRK ISHRK', which means 'to be partner to' or 'associate with'. So, the word 'ishtirakyy' 'socialist' (n. and adj.) and 'ishtirakiyyu:n', its plural, are also derived from the root. The word 'masrif' 'bank' is related to the root 'SRF', which means 'to change or spend money'. Thus, we have 'sarraf 'cashier,' and 'masari.f 'expenses'. As for the word 'diblomasiyya' 'diplomacy,' it is a loan word that has entered the Arabic lexicon and has been used without much alteration in its sounds, except for the necessary changes in its suffix and the replacement of the voiceless stop $/ \mathrm{P} /$ for the voiced stop /b/. The other word, 'rasmaliyya', represents an unusual compounding of two Arabic words 'ra's' 'head' and 'mal' 'money'. From the word 'rasmal' 'capital' other words are derived, such as 'rasmaliyy', 'capitalist' ( n. and adj.) and 'rasmaliyya' 'capitalism’(Gibb,1926, Al-Mubarak: 1972 and Matar, 1985).

This discussion shows that Arabic is flexible and can absorb new terminology meeting the constant needs of its users for development.

### 2.7.4 Semantic Derivation

The language experts agree that Arabic has the characteristic of creation and origination which enabled the Arabs to derive words from others. For example, the name of 'Jinn' (fairies) is derived from 'Ijtinan' (veil) and that "Jeem" and "Noon" letters always refer to veil. Arabs call the 'armor' 'veil' and they say "night veils" and 'Ajinnat Al-lail', i.e "Janin" which means 'baby in his mother's womb, and that "Ins" i.e. human being is derived from appearance. (Al Mubarak, 1972).

Derivation defines the word or its basic element and its original meaning, while set-ups and inflections identify its shape or construction which is considered as an additional meaning which, when added to the general meaning, specifies it and makes it definite.

To clarify the semantic derivation in Arabic, the semantic domains of vocabulary in English are compared with Arabic. In English, for example, expressions like "chairman", 'chairperson', and 'he chaired the meeting' are all related to the word 'chair', which is considered the semantic domain of these expressions. In Arabic, the equivalents of the above mentioned English expressions are related to completely different semantic domains. The corresponding Arabic expressions are 'ra'i:s qism' 'chairman', 'ra:is jalsa', 'chairperson, and 'ra'isa ljalsata' 'he chaired the meeting'. All the above Arabic derivations are related to the word 'ras' 'head' 'which is a semantic domain different from that of English. (Peters and Habeeb 1996)

This discussion shows that the Arabic language is characterised by:

1) Circulation of the item around one meaning;
2) Relationships between words and their meanings (suitability of words to their meanings- approximation of words due to approximation of their meanings);
3) Dualism of words.

Therefore, reading a text in Arabic involves many strategies and requires the reader to be fully aware of every aspect of the language presented in the text. Comprehension of this text also requires the reader to be equipped with a good command of the language system in terms of its word forms, syntax, semantics etc.

### 2.8 The Situation of Teaching Arabic in the State of Qatar

The education system in Qatar is centralised; i.e. all the schools follow the Ministry's regulations of academic and administrative activities, one national curriculum and the same textbooks for every grade and stage. The organisation of programmes and seminars is also planned and undertaken by the Ministry.

Education in Qatar places strong emphasis upon teaching the Arabic language at the elementary level. In an elementary school's timetable, $30 \%$ of the time is
devoted to teaching Arabic. In language teaching, about $15 \%$ of the Arabic course is spent on teaching reading to increase pupils' ability to master and understand the materials they read. Reading is not dealt with in the Qatari schools as a separate subject, but it is taught as an integrated part of the Arabic language course on the assumption that reading is an integrated language skill. This course includes reading, dictation, grammar, oral and written composition, poetry and handwriting (Ministry of Education, 1996).

The ultimate goals for teaching reading in the Arabic language course for the fourth grade of the elementary stage, which is the focus grade of this study are to enable the pupils to (Ministry of Education, 1999):

1) Pronounce correctly the words in the new lesson.
2) Analyse and synthesise these words into their consonant and vowel sounds.
3) Analyse and synthesise these words according to their long vowel syllables.
4) Read clearly and fluently short texts (1-2 paragraphs).
5) Read the text with regard to the punctuation marks, stress and pitch of the sound etc.
6) Understand the meanings of the words in the new lesson and its main ideas.
7) Read and discuss the meaning of the new words of each paragraph.
8) Read and discuss the specific ideas of each paragraph.

In teaching reading for the fourth grade, teachers are expected to follow the integrative approach to teaching language, which combines the word with the sentence and letter. Specifically, it is suggested that the teacher should (Ministry of Education, 1999):

1) Warm up the pupils by reading some sentences and paragraphs using pictures, illustrations, short anecdotes, etc.
2) Read aloud the lesson correctly and fluently as a model reader to the pupils focusing on correct articulation of letters and sounds, and punctuation marks.
3) Explain the meaning of the new words while reading each paragraph.
4) Discuss with the pupils the main ideas while reading each paragraph.
5) Allow the pupils individually to read aloud 1-2 paragraphs.
6) Allow the students to read silently the whole lesson and to do the following exercises:
a) Discussion of the meaning of new words in the paragraph.
b) Discussion of the main ideas of the paragraph.
c) Copying a few sentences from the lesson.
d) Completion of sentences with some words the pupils have learnt from the lesson.

Normally, teachers of each grade of the elementary stage teach all subjects: (Islamic Education, Arabic, Maths, Science, Arts (basic drawing), Physical Education and Civil Education (social principles). The average size of the class is about 30 pupils and the time allotted to each class is 45 minutes, starting at 7:45 a.m. and finishing at $1: 15$ p.m., five days a week.

A formal report by the 'Presidency of Educational Supervision for the Elementary Stage' about the situation of teaching Arabic in Qatar noted the following (Ministry of Education, 2000):

1) The lack of specialised teachers of Arabic negatively affects pupils' mastery of the basic skills of the Arabic language.
2) Teachers' motivation to attend in-service training activities and courses, which aim to upgrade the level of their teaching competencies, is very low.
3) Arabic language teachers are over loaded with administrative and teaching tasks and related daily duties, in comparison with their colleagues in other subjects.
4) Experienced teachers are transferred to higher grades or stages.
5) There is a lack of co-operation between parents and schools that adversely affects the pupils' progress.
6) There are some non-native Arabic speaking pupils from various South Asian countries in the classrooms. This puts more pressure on the teacher, who has to give more effort and time to considering individual differences in learning and increasing the interaction of the pupils.
7) In such a school environment, teachers are unable to discover or assess pupils' difficulties in reading specifically, or in Arabic generally. Even if some teachers could do so, they could not plan nor implement any plan for meeting the pupils' needs or solving their problems.

Concerning the Arabic language curriculum in the fourth grade, this report indicated that:

1) There is repetition and overlapping of some lessons in Arabic with lessons in other subjects of the same grade, which wastes time and effort.
2) The lessons do not include practical and cognitive topics or tasks that accord with modern developments.
3) These lessons do not reinforce the pupils' loyalty to their country or link them to their environment and future life.
4) The teaching aids are still traditional, old and teacher made.

It is well known that the pupil who finds difficulty in reading is likely to face difficulties in other school subjects. This means that failure in reading results in failure in the other subjects (Abdull-Naby, 1991). In addition, evidence shows that most pupils who fall behind in reading skills and do not receive help rarely catch up with their peers who become fluent readers. They fall further behind in school, become frustrated, and drop out at much higher rates than their classmates. They find
it difficult to obtain rewarding employment and are effectively prevented from drawing on the power of education to improve and enrich their lives.

### 2.9 Summary

The MOE in Qatar has recently started to address the various needs of learners by establishing special classes in ordinary schools that might cater for the needs for children with specific learning difficulties. The teaching of Arabic in Qatar still deals with reading as a skill integrated with other basic language skills. Reading as a separate skill has not yet received proper attention in school curricula. Furthermore, no previous attempt has been made to develop reading comprehension programmes. Further studies could be done to investigate ways to improve the situation. Hence, the present study was an attempt to contribute to this knowledge development.

## CHAPTER THREE

## THE READING PROCESS

## AND COMPREHENSION PROCESS

### 3.1 Introduction

This chapter explains the theoretical foundation of the research by exploring the nature of reading comprehension and the ways in which it may be assessed. It begins by discussing reading models, mainly the bottom-up, top-down, and interactive models. It then discusses the reading process. The concept of comprehension as an interactive process between reader, text and context is introduced. This chapter also explores the nature of reading comprehension, and its components, namely, word recognition, and comprehension. The researcher defines comprehension on the basis of the cognitive approach. Then, the skills of comprehension, levels of comprehension and associated difficulties are discussed. Ways of measuring reading comprehension are outlined. Finally, two broad approaches to reading comprehension intervention are considered.

### 3.2 Reading Models

The major commonly used models are as follows:

### 3.2.1 Bottom-Up Models

According to the bottom-up theory, the reader initially focuses on the smallest units (sound and word elements) and works up to the meaning (Lerner, 1997). Pupils learn consistent letter-sound association and other essential phonic skills to help them unlock the code and become independent readers (Gough, 1985). Harris and Sipay (1990) view this model of reading as essentially a process of translating graphic symbols into speech during oral reading or into inner speech during silent reading.

The theorists of bottom-up models believe that written language is subservient to oral language. Sensory or perceptual processes are believed to occur prior to or independently of the cognitive processes. According to this model, the reader collects information from the printed materials and after that syntactic and semantic processing occurs. Understanding the materials is the result of the flow of information. Two of the most famous bottom-up models are those of Gough (1985), and La Berge and Samuels (1985). Gough believes that pupils need to learn decoding skills and that fluent decoders use the inside letter-sound in conformance to rules. Gough suggested that guessing only occurred when reading through decoding became difficult (Gough, 1985). Gough's model showed exactly how the reader might process print without context, whereas La Berge and Samuels modified the model in such a way that it is now near to the interactive one, which will be detailed in a later subsection. Stanovich (1985) supported the bottom-up theory. He claimed that pupils who get a good start in reading would read more and become better readers. In contrast, pupils who have a poor start in reading do not engage in wide reading and fall further behind. Lapp and Flood (1997) observe that most teachers today agree that pupils' acquisition of phonics skills is an essential part of their reading development. Teachers also concur that pupils who start slowly in acquiring decoding skills rarely become strong readers and the early acquisition of decoding skills leads to wider reading by pupils in and out of school. According to Weaver and Resnick (1979), the process of reading comprehension is dependent on accurate word recognition. Perfetti (1988) argues that the verbal efficiency of the reader is, in the final analysis, responsible for reading comprehension:
> " Individual differences in reading comprehension are produced by individual differences in the efficient operation of local processes." (119).

According to bottom-up models of reading, the contribution of these local processes (e.g, lexical items, and grammatical structures) to overall comprehension
should not be seen in isolation. Instead, textual features which are responsible for reading comprehension are interdependent, and they work in tandem to bring about a representation of the reading passage in the mind of the reader, and hence overall comprehension of the text. The phonics method, which is an example of a bottom-up model, is explained below.

### 3.2.1.1 The Phonics method.

The Phonics method, or what is called the 'Explicit code-emphasis Model', began to be used in the middle of the nineteenth century, typified in Mortimer's book 'Reading Without Tears'. By the early twentieth century, many new books for teaching reading had adopted the phonics method. There are two types of codeemphasis programmes: first, synthetic phonics methods, which deal with isolated letters and their sound equivalents and also deal with building individual phoneme elements into whole words; second, analytic phonics methods which deal with whole words that have consistent sound-spelling patterns, and then analyse the phoneme elements that make up the word (Lerner, 1997). The following points describe the steps in teaching a code-emphasis programme (Carine: 1990):

1) Teachers should begin with letter sounds that can be distinguished, aurally or visually (for example, short vowels and the consonants $\mathrm{b}, \mathrm{c}, \mathrm{d}, \mathrm{f}, \mathrm{g}, \mathrm{h}, \mathrm{k}, \mathrm{l}, \mathrm{m}, \mathrm{n}$, $\mathrm{p}, \mathrm{r}, \mathrm{s}$, and t ).
2) When the pupils have learned five or six grapheme-phoneme relationships, then teachers can introduce using regular consonant-vowel (CV) or consonant-vowelconsonant (CVC) patterns.
3) After pupils have mastered basic letter-sounds and used them successfully, teachers can teach them letter combinations and phonics rules. Letter combinations include:
4) Vowel and consonant digraphs: two vowels or two consonants that together make one sound, such as 'oa' in 'boat' or 'sh' in 'ship';
5) The diphthongs: two vowels, each modifying one another and both contributing to the sound produced, such as 'oy' in 'boy';
6) The "r-controlled" vowels, such as 'ol' in 'cold';
7) Teaching these letter combinations permits the pupil to attack words generally.

### 3.2.2 Top-Down Model

In this model, the pupil begins with whole words to obtain meaning. Goodman (1970) and Smith (1994) were the first to describe reading as a top-down process. The reader, instead of relying on individual words or parts of words to obtain meaning, predicts meaning as reading occurs. The reader's prediction as the reading occurs makes of the reader an active rather than a passive participant. The reader initially focuses on general concepts, ideas, or meaning and works down to the smaller units of word recognition (Smith, 1994). Pupils read familiar, meaningful wholes first, predictable materials that draw on concepts and experiences they already have. Soon, they will spot familiar words and phrases in familiar use anywhere (Goodman 1986). Advocates of this model have tried to account for factors outside the text, which are responsible for reading comprehension. Researchers on reading have suggested that poor readers are poor because they are unable to activate their knowledge when processing reading texts (Stanovich and Westn 1983; Perfetti 1985). According to these researchers, comprehension takes place as a result of the reader's activating his/her background knowledge, with minimal support from the text. (Bernhardt, 1991). An example of a top-down model is the whole language approach.

### 3.2.2.1 The whole language approach.

The whole language model has its roots in the progressive education movement of the 1920s and 1930s and is particularly associated with John Dewey (Goodman, 1989). Whole language is a philosophy about learning to read and to use language that highlights the wholeness of the integrated language forms (oral language, reading, and writing).

Whole-language educators maintain that traditional reading methods make learning to read difficult by breaking whole language into separate component skills (Goodman, 1986). They argue that the sound-symbol relationships of the printed language phonics will be naturally and incidentally mastered as pupils learn to read and write meaningful whole messages (Lerner, Cousin, and Richek, 1992).

They criticise the skill-building, drill-and-practice activities of traditional classrooms as boring exercises, and they suggest instead that teachers use repetitive lines within stories and poems to help children figure out the code on their own (Cullinan, 1987). Moreover, whole-language proponents argue that the books often used with poor readers are so contrived in vocabulary and style that most pupils find them unappealing. According to them, poor readers do not understand why they are completing drill-and practice activities: moreover, they are frustrated with the dull stories they are expected to read (Routman, 1988). A whole-language approach also pays some attention to the need to increase a pupil's motivation to read (Gersten and Diminio, 1990).

Goodman $(1986,1989,1990)$, who pioneered the whole language movement, notes that it:

1) Builds around learners, and language in whole situations;
2) Encourages respect for language, for the learner, and for the teacher;
3) Emphasises the meaning and not the language itself, in authentic speech and literacy events;
4) Encourages learners to take risks and invites them to use language in all its varieties for their own purposes.

In a whole language classroom, all the varied functions and forms of oral and written language are appropriate and encouraged. Whole language educators believe that language should be whole, meaningful and relevant to the pupil. It should combine both oral and written language. Reading is just one part of the language system closely linked to oral and written forms of language. Both oral and written language forms are acquired through natural usage. The whole-language educators note that pupils learn to talk without special exercises and drills, and presume that similarly, pupils will acquire reading skills naturally through exposure to literature, and by having many experiences with language, big books, stories, poems, and books from infancy (Toliver, 1990; Goodman, 1986, 1990, Lerner, 1997).

Marie Clay's reading programme is a further example of the top down model.

### 3.2.2.2 Marie Clay's Reading Programme

The Reading Recovery Programme provides an example of a top down model. It involves providing children who are at the lowest level with individual instruction. Clay based her Reading Recovery on an extensive programme of research conducted in Auckland in the late 1960s and throughout the following decade. Clay was influenced by the ideas of Goodman (1967), and Smith (1978) about the Top-Down approach to reading comprehension. The good reader, according to Clay, is the one that manipulates 'a network of language, spatial, and visual perception cues' and categorises these, searching for 'dissonant relations and best fit solutions' (Clay: 1979). Goodman inspires Clay, in this respect, when she compares reading to a game of 'Twenty Questions'. The smart reader asks questions crucial to reduce the uncertainty of meaning, whereas the poor reader asks irrelevant
and trivial questions that waste time and do not help in the process of comprehension. According to Clay (1985) the skilled reader may pay attention to:

1) The meaning,
2) The sentence structure,
3) Order cues,
4) Special features,
5) Special knowledge,
6) First and last letter cues,

Clay states that the 'high progress' reader operates on print in an integrated way. She links the letter to the sound associations. The reading strategy changes in accordance with the text but with special focus on meaning. In contrast, the low progress reader often pays no attention to visual details and concentrates only on what he/she can invent from memory. This approach, based on a strong top-down theoretical tendency, is one of the main pillars of Clay's research. Clay (1991) states that skilled readers validate language prediction by using minimal word-level information. In efficient rapid word perception, the reader relies mostly on the sentence and its meaning and some selected features of the forms of words. Awareness of the sentence context (and often the general context as a whole) and a glance at the word enable the reader to respond instantly. Clay's approach takes the lowest achieving pupils at age six, irrespective of their IQ, category of special educational need, and level of maturity and accelerates their learning. Clay's methodology has been criticised mainly in the areas of sampling, gain score interpretation and statistical analysis of results (Wood, 1994).

Neither the bottom-up nor the top-down models by themselves seem to provide a full account of the complexities of the reading comprehension process. The
nature of the reading process can emerge if one takes into consideration both text driven and reader driven factors.

### 3.2.3 Interactive Theory

This is integration and a compromise between the top-down model and the bottom-up model. Spiro and Meyers (1984) consider reading as an interactive process. This view considers that reading involves both prior knowledge from past experience and prediction and construction of meaning from the text. The top-down model and bottom-up model are used simultaneously. In this model, reading includes a combination of linguistic and semantic knowledge with visual information from which meaning is constructed. The most famous interactive models are those of Rumelhart and McClelland (1982) proposed that in skilled readers, top-down and bottom-up processing occur simultaneously. In this regard, comprehension depends on both the information in the reader's mind and the graphic information. Comprehension could be handicapped if a piece of information or a critical skill is missing. In this case, the skilled reader could rely on decoding words or understanding the meaning from the context or both. According to Just and Carpenter (1980) a general condition is that the meaning of the word must be accessed, while a more specific condition might be that the word is transferred to working memory. When all of the processing associated with the word in focus is completed, the "Get next input stage" moves the eyes forward one or two words and processing of the next fixated word begin. Another important component of the model is the integration process, since the reader in order to capture the coherence of the text, must relate clauses and sentences to each other. Readers use two basic strategies to integrate old and new information. First, they can check to see if new information is related to information already in their working memory. The second strategy, which takes longer than the first, is to search for explicitly marked old information.

Billingsley and Wildman (1990) state that the reading is an interaction between thought and language. Thus, comprehension can be said to be an interaction between prior knowledge and new knowledge for the purposes of meaning construction. According to Irwin (1991), (p.9):
"Comprehension can be seen as the process of using one's own prior experiences and the writer's cues to construct a set of meanings that are useful to the individual reader reading in a specific context".

Hall (1989) points out that it is an interactive process, in which the reader brings to a text his or her expectations and prior knowledge, and it is the responsibility of the reader, to use this knowledge and strategies to give meaning to the text. Reading comprehension, according to the schema theory, takes into account what readers may already know and how they go about developing and adding schemata as they read (Armbruster and Vann, 1996). Comprehending a text is an interactive process between the reader's prior knowledge and the new information available in the text (May 1994). Within the interactive models, reading comprehension has four major components: reader environment, utilization of knowledge and control, declarative and procedural knowledge and reader product (Rudell and Speaker 1985). Balanced Reading Programmes can illustrate the interactive model.

### 3.2.3.1 Balanced Reading Programmes

As mentioned earlier, the bottom-up model (explicit code-emphasis) of reading assumes that the reader is text driven and relies on the automatically recognition skills of words. In contrast, the top-down model (whole-language) assumes that the reader brings a great amount of information into the reading process in order to smooth the way for even the lowest level of reading subskills. The
combination of whole language and phonics instruction gives rise to what are called balanced reading programmes.

A balanced reading programme is often described as a combination of whole language and phonic instruction (Baumann, Hoffman, and Duffy-Hester, 1998; Wharton-McDonald, Pressley, Rankin, Mistretta, Yokoi, and Ettenbeerger,1997). The prior characterisations of balanced reading instruction vary widely (Freppon and Dahl, 1998). Among the many features of such programmes are: first, combining certain kinds of approaches with others; second, combining certain kinds of instruction with other kinds of instruction, such as learner and teacher initiated instruction; third, equally weighting curriculum with instruction, whereas the types of curriculum and instruction have been viewed before as antithetical; and, finally, some multidimensional combination of all of the above, which may even include other factors such as assessment ( Freppon and Dahl,1998; Hiebert and Colt, 1989; Dudley- Marling, 1996; Baumann and Ivey, 1997; Raphael and Pearson, 1997).

One of the most famous approaches in Balanced Reading Programmes is offered by New Zealand educators (Baumann, Hoffman, Moon and Duffy-Hester 1998: Barnes 1996). They addressed issues of environmental design, assessment, modelling, guidance, interactivity, independence, practice, oral language acquisition, writing and reading processes, community building, and motivation. This New Zealand concept of balance, sometimes abbreviated as 'Reading To, With, and By' offered an entirely unique conception of balance (Baumann, Hoffman, Moon and Duffy-Hester 1998: Barnes 1996). The programme was first introduced in New Zealand, then studies using this method were conducted in the USA.

Following the analytical study of the major models of reading, and the exploration of the reading process the next section will try to show how reading comprehension as a process operates.

### 3.3 The Reading Process

Reading is a complex process, in which readers pass through many stages, depending on individual differences. Some pupils start to read early and others do so late and progress slowly. Some pupils are in between the two categories (Bond, Tinker, Wasson and Wasson: 1984). According to Rudell and Speaker (1985) the reading process involves a complex set of interactions between a reader and a text allowing meaning to be constructed. Reading comprehension is seen by the cognitive theorists as a dynamic interaction between the reader and the text and the context of the reading situation includes the purposes for reading that the reader might use in building a meaning of the text. (Lipson and Wixson: 1991; Richek, Caldwell, Jennings and Lerner, 1989). The interactive elements of comprehension are the following:

### 3.3.1 The reader

Prior knowledge refers to what the reader already knows or has experienced, that he/she brings to the act of reading for the purposes of meaning construction (Smith, 1988). The way in which the reader's function is perceived varies from one reading theory to another. Some theorists see the reader as a fairly passive recipient of information. These theories confirm that the reader brings his/her own personal knowledge and experience of language to the reading text (Lerner, 1993). This knowledge contains all that the reader knows about how text is structured and organised, and what procedures are useful in interacting with text (Gunning, 1996). Five generalisations about the reading process of effective readers are as follows (Anderson, Hiebert, Scott, and Wilkinson, 1985):

1) Reading must be fluent. The reader must learn to recognise words easily and quickly. If readers expend all their concentration on figuring out words, they will be unable to focus on meaning. La Berge and Samuels (1985) describe the fluent
reader as one whose decoding processes are "automatic," requiring no conscious attention. When a reader is fluent he or she is more able to manage his or her attention carefully, which clearly can facilitate ongoing comprehension and integration of material with prior knowledge. The fluent reader uses prior knowledge to predict the next word, the next line, and the next sentence (Lerner, 1993).
2) Reading is a constructive process. Readers must "construct" the meaning of the written passage by drawing on their existing store of knowledge and experiences. For example, when reading about computer software, a reader came across the word utilities. Using his/her prior knowledge, he/she constructed the meaning of this text to be about electric power companies. Of course, utilities in this context refers to programs that help computer users (Lerner, 1997).
3) Reading must be strategic. Skilful readers are flexible. They change and direct their reading style, depending on their purpose for reading (Lerner, 1997). Strategies began to be emphasised in many curricular reform movements in the 1980s' and 1990 's, and a number of reading programmes encouraged the teaching of comprehension strategies (Pressley, El-Dinary,1993). Oakhill (1982, 1983, and 1984) has proposed that skilled readers are better able to integrate information in a text, and are more successful in drawing appropriate inferences from sentences and texts. There are six crucial reasons why strategic reading is fundamental to the development and education of pupils. First, strategies allow readers to elaborate, organise, and evaluate information derived from the text. Second, the acquisition of reading strategies matches and overlaps with the development during childhood of multiple cognitive strategies to enhance attention, memory, communication, and learning. Third, strategies are controllable by the reader, i.e. they are personal cognitive tools that can be used selectively and flexibly. Fourth, strategic reading reflects metacognition and
motivation because readers need to have both the knowledge and disposition to use strategies. Fifth, strategies that foster reading and thinking can be taught directly by the teacher. And sixth, strategic reading can enhance learning throughout the curriculum (Paris, Wasik, and Turner, 1991).
4) Reading requires motivation. Learning to read takes attention over a long time. To help readers to become successful, teachers should make it enjoyable, raise their motivation and convey to them the belief that they will learn to read. According to McCombs and Whisler (1997) teachers should encourage pupils by using a variety of incentives in order to make learning happen. They also stress that teachers should strive to find ways to motivate pupils to read. There is no doubt that when pupils are highly motivated to read, the likelihood that they will comprehend the reading material increases. Additionally, a lifelong love of reading is a highly desirable outcome of reading instruction (Johns and Van, 1994). According to Graham and Harris (1989) motivation may be increased when pupils' perception of self-efficacy is increased. Sraracho and Dayton (1989) found that young readers reading attitudes reflect their instruction. Reading attitude may also be influenced by pupils' perception of each other as good or poor readers. In his study of 562 pupils in grades $1-6$, Schell (1992) found that poor readers were consistently perceived by their peers as having more negative personal and social traits than good readers were (Schell, 1992).
5) Reading is a lifelong pursuit. Reading is not mastered once and for all but it is a continuously developing skill. Therefore, teachers should search for strategies that offer many reading opportunities. Scott (1996) found that teachers are able to motivate pupils to become lifelong readers if they have a specific plan that includes the development of pupils' feelings of self-efficacy.

### 3.3.2 The text:

The text's content and organisation influence the reader's process of reading and making sense of it. The aim of reading is to obtain the meaning from a text (Gough, 1985). " The test of efficient reading is whether the meaning extracted is the same as that the author originally attempted to communicate" (Cairney, 1990). However, it should be understood that the meaning of the text is relative. Reading depends upon the accommodation that takes place between reader and text in a specific context. It is to be expected that readers who share a common culture and whose context for approaching the text is similar will create similar meanings. Even then, however, the meanings they create will not be identical.

### 3.3.3 The context:

The situation or environment affects the reader's process of reading. For example, the atmosphere of exams could create a tense and anxious environment where the reader fails to understand what he/she usually understands under normal circumstances. Context affects comprehension in various ways. First, readers who come from a similar social and cultural setting will share specific meaning, and these are likely to be reflected in the meaning they perceive in the text. Secondly, any text is written in a specific context and is to some extent shaped by the culture and social fabric within which it is created. Thirdly, the specific context in which the reader comes to the text can influence the way they receive it (Cairney, 1990).

### 3.4 The Nature of Reading Comprehension

Comprehension is a crucial part of the process of reading. Although the first stages in reading emphasise decoding, a pupil must be able to recognise and understand words. Word recognition and comprehension are important if the pupil is to learn and to function as a reader (Lemer, 1993). Reading comprehension refers to understanding the meaning of what is read. Readers must be able not only to
recognise words, but also to see meaning in the text (Lipson and Wixson, 1991). Reading is composed of word recognition and comprehension (Lerner, 1993); pupils must recognise the words in order to understand the meaning. The purpose of comprehension is to gather meaning from the printed page (Lerner, 1993).

Word recognition requires the child to learn to link between printed codes and their meanings. Meanings must be clear and accurate, if the child is to understand the subjects $\mathrm{s} / \mathrm{he}$ is reading. $\mathrm{He} /$ she must also be able to choose correct meaning of the word in accordance with context. When the child learns using context during recognition of printed codes, this will help him/her to choose the correct meaning from several meanings (Bond et al, 1984). Therefore, comprehension depends upon the reader's background, knowledge of vocabulary, and her/his ability to explain words and transform them into ideas and concepts.

It is worth mentioning that in Arabic language teaching, much attention has been accorded to word recognition, but the problem of reading comprehension is far from being superficial. Through educators' observations, it is noticed that reading comprehension is a major deficiency and is not necessarily the result of a deficiency in word recognition. Many pupils do acquire the basics of word recognition, but they still find difficulties in the comprehending of complex passages. Weak readers may face some obstacles in the comprehension process. For example, they may be unable to understand the meaning, and they might read only to guess the signs and words. The pupil who follows word by word rarely understands the meaning of the whole sentence. Such pupils cannot look effectively at the materials at hand, nor can they employ a strategy for sustaining their comprehension and effectively exploring the comprehension process. Comprehension is considered as a basic part of the reading process. A pupil cannot be considered as a reader unless $s /$ he understands what $s / h e$ is reading, even if $s /$ he pronounces words and letters properly. When the pupil masters the process of recognising, her/his mental abilities and capabilities affect
development of his comprehension skills. Therefore, reading comprehension depends upon the pupil's motivation and basic background in the concepts and skills of word cognition, in addition to the ability of thinking (Abdullah and Mustafa, 1994). In experimental studies carried out by Abdullah and Mustfa (1994), it has been found that weak readers commit oral mistakes at a rate of 5.8 in every hundred words. Moreover, $51 \%$ of weak pupils' reading mistakes are related to change of meaning, while good readers' mistakes are not of this type. This means that the basic problem of weak readers is failure to recognise meaning. Therefore, a pupil who is slow in reading is usually hesitant in reading and tends to repeat reading what has been read, due to inability to comprehend what was read the first time. This relates to lack of training in reading techniques. If the pupil is to be quick in reading, there is a need to be accurate in the understanding of the meaning of words and the relationship of sentences with each other (Abdullah and Mustafa, 1994).

### 3.5 Levels of comprehension:

The good reader is one who remembers what he/she has learnt before and integrates new knowledge with what has already been learned. Some researchers like Bernhardt (1991) claim that there cannot be "one true comprehension," but rather a "range of comprehension." According to this claim, good and poor readers exhibit different levels of comprehension in various ways, depending on the purpose of reading, the background knowledge they have, and from which perspective they approach the reading passage. Comprehension may therefore occur at various levels:

1) Literal-level: This means the recognition and the remembrance of previous information, such as main ideas, details, and event-sequences. (Harris and Sipay 1990) At this level the reader follows the story or the ideas in the light of the author's organisation of the events and directions. Some researchers think that
recognising the main and detailed ideas is proof of understanding.(Bauman, 1984; Williams, 1986; Chan, 1991)
2) Analytical level: The reader at this level can interpret the vocabulary and structure the sentences that the author uses in his/her own words. He/she can differentiate between the primary and the secondary ideas and summarise them. The reader can categorise logically the ideas and the information presented, as well as recognise the author's intention and the implicit meanings (Shahata,1993).
3) Evaluating level: In one of the main components of reading, the reader undergoes the process of distinguishing the style, the scene, the author's objectivity and her/his own ideas. At this level, the reader can grasp the main ideas and the relations between them. Moreover, the reader can evaluate and criticise the new materials and compare them with other subjects. His/her experience of reading helps in reaching conclusions with regard to contradictory or different information, as well as understanding the author's intention, in order to fulfil the critical level of reading. (Harris and Sipay, 1990; Meese, 1994).

### 3.6 Reading Comprehension Needs

In the teaching of Arabic to understand written subject matter, it is expected that pupils need to master the following abilities (Shahata, 1993):

1) Understanding the main ideas of the passage;
2) Simple recalling;
3) Understanding the meanings of words;
4) Organising elements in the material being read;
5) Reading in order to resolve problems;
6) Reasoning;
7) Remembering what has been read;
8) Reading properly and to execute instructions;
9) Skimming and scanning, which includes the child's ability to recognise quickly the main points, link them with each other and remember them.

According to Harris and Sipay (1990), there may be many reasons for weakness of growth of reading comprehension. Such reasons include below-average general intelligence, lack of language practice opportunity, and deficiency of hearing and pronunciation, which determine vocabulary development. Garner (1987) argues that there are some children who cannot understand or reach the required comprehension level for several reasons, such as deficiency of coding, confusion on execution of required task, weakness of knowledge, weakness of concentration, lack of self-appraisal, lack of self-confidence and lack of stimulation. Slow reading, word by word, causes weakness of comprehension because the pupil is often forced to reread the text. This causes lack of development of the word recognition system. Also, inability to concentrate or sustain attention may cause weakness of comprehension.

According to Taylor, Harris and Pearson, (1988), teaching of reading comprehension is often deficient for the following reasons:

1) Teachers do not provide the students with clear instructions with regard to comprehension-strategy performance. Taylor, et al., (1988) suggest that teachers emphasise only some skills (for example, picking out the main idea in the paragraph), and help the pupils to complete the work on the basis of this skill. In one study for Mustafa (1999), the teachers allocated only $1 \%$ of the time given to the reading class to understanding the materials read. In a survey related to issue of the reading textbooks, one researcher found that comprehension was referred to, but no clear samples were suggested. Reading involves the need for pupils to be taught a variety of skills. Mustafa (1999: 48) noted:

> "The pupil at elementary school must be advised with several targets to become a good reader. Some of these targets are ability to transform written codes into meanings, ability to read and understand, and gaining skills enabling the student to read different patterns".
2) Comprehension reading skill is taught separately and it is not applied to other materials in the textbook. There is no evidence that this skill is applied or used by the students when they read some materials privately. In an empirical study (Taylor, et al, 1988), researchers found that the pupils of the sixth grade showed excellent skill in reading to extract the main idea, on the basis of their performance in answering the supplementary questions at the end of the text. The average number of right answers was $88 \%$. On the other hand, their performance was lower with regard to the questions in a multiple-choice test of the general idea in the subject of social studies. The average percentage of right answers was $73 \%$. Performance in tracing the main ideas of a subject from the same book was low and the average score was only $40 \%$ (Taylor, et al., 1988). There is little benefit in studying comprehension skills if pupils cannot apply them to other materials, including those encountered in other schools subjects, and in private reading. Teachers need to make clear their strategy in order to teach comprehension, so that pupil can apply the same strategy in other materials.
3) Pupils are not being taught how to evaluate their abilities to read individually. They are not able to know whether they understand the materials. The pupils are not taught to adopt a strategy to sustain what they have read when they fail to understand the read materials. A lot of good readers have learnt to do that by themselves, but a lot of weak readers need to be given specific comprehension instructions (Taylor, et al., 1988).

The next section will show how those needs covered in the above section can be measured. It will shed light on how reading comprehension can be measured to determine whether pupils can understand what they read.

### 3.7 How Reading Comprehension can be measured

Assessing reading comprehension is important in order to determine whether and to what degree readers understand what they read. There are a number of ways to assess a pupil's comprehension of a text. Reading comprehension assessment can be categorised into product versus process measures. An example of the former is multiple choice items, while process measures include the Cloze Procedure and verbal report measures. Since reading comprehension has many facets, it has been suggested (Olson, 1990) that the exclusive reliance on one assessment technique might not capture all facets of comprehension and might lead to generating conclusions about reading comprehension that are simply artefacts of the technique being used. Each assessment technique has its own strengths and limitations, even though it can be argued that some assessment techniques have more limitations than others do. To remedy this problem, some researchers have advocated the use of a combination of assessment tasks in order to enhance the validity of their findings (Afflerbach, and Johnsston 1984; Cohan, and Manion 1989; MacGinitie, 1993; Wolf, 1993). Olson (1990) advocates this view on the basis that
> "Using multiple assessment measures such as observation, interviews, and instructional techniques, teachers can broaden classroom reading evaluations to include the pupils perceptions. In this way, teachers can gain a more complete understanding of pupils abilities, and the pupils can also gain a more complete understanding of themselves as readers and learners in the classroom" (p. 163).

The next section reviews three measures of reading comprehension and evaluates their effectiveness in helping to assess reading comprehension. According to Wolf, (1993), the multiple-choice, the open-ended, and the cloze formats have
been used in $52 \%$ of studies in reading comprehension. In addition, there is growing awareness of the value of using verbal interviews and think-aloud tasks as measures of reading comprehension.

### 4.7.1. Multiple-choice

The multiple-choice technique is considered the most "objective" and the most popular means of assessment, due to the fact that it is designed to allow mass objective scoring, thereby ensuring consistency among raters and increasing reliability. Multiple-choice measures have provided a reliable and easy-to-score means of assessing pupil outcomes (Perkins and Jones, 1985; Jeongsoon, 1997).

Multiple-choice items came to be used as the primary question format in educational assessment because of earlier concerns regarding less objective measurement procedures. Previous methods used subjective and impressionistic techniques for scoring. The major advantage of multiple-choice testing lies in the reliability of scoring procedures. The disadvantages of subjective rating are overcome by using a test in which pre determined correct answers are identified as a standard set of options from which to choose an answer. This was viewed as being fairer to individual test takers. Second, since the questions could be answered quickly, more questions could be included in a single test, allowing us to cover a broader range of questions. In addition, the development of sophisticated statistical analyses tests (eg:item response theory) allowed a better interpretation of scores from these tests. Finally, multiple-choice tests allowed quicker and cheaper score rating due to their ease and cost-efficiency. However, criticism has been levelled against multiplechoice questions as a valid measure of reading comprehension. Bernhardt (1991) argued that multiple-choice items can be text independent, allowing the reader who is knowledgeable about the topic at hand to answer the questions correctly without the need to comprehend the reading passage. Even if a multiple-choice item is text-
dependent, a reader can answer such an item incorrectly for very good reasons, and she/he can get the item right for incorrect or trivial reasons (Madaus, et al, 1992). Moreover, multiple-choice questions may tend to discourage the reader from reading all the choices, as well as the passage at hand (Wolf, 1993).

In recent years, many educators and researchers have outlined the potential disadvantages of multiple-choice assessment tests for measuring educational achievement. Their view is that these kinds of tests are remnants of outdated views of thinking and learning processes. Resnick and Rosnick (1992) argues that the assumptions used to create this test have resulted in the "decontextualization" of the curriculum. The major argument of critics of multiple choice lies with the fact that cognitive abilities are assessed as collections of isolated skills, and they are assessed independent of context in which they might be applied. According to them, higher order thinking skills that should be the aim of teaching instructions cannot be assumed to be just a sum of subcomponet skills and are highly contextualized. Critics of multiple-choice testing formats also state that in the field of reading, the ability to select the correct answer from set choices may not have a lot to do with reading comprehension skills of pupils.

Many of the criticisms, however, may sound too stringent because they are aimed at poorly constructed multiple-choice items. What these criticisms imply is that is not easy to construct good multiple-choice items. Multiple-choice questions are not inherently supposed to ask only trivia not essential in comprehending the text, or to measure the command of grammar or vocabulary; they can and do ask pupils to draw conclusions, and make inferences from the text.

Despite the above-mentioned criticisms of multiple choice items, is some researchers advocate the construct validity of the multiple choice test as a measure of reading comprehension (e.g., Farr, Pritchard and Smitten 1990, Freedle and Kostin, 1993: Powers and Leung, 1995). According to them, a multiple choice reading
comprehension test may be valid as a measure of at least one type of reading such as reading for specific information. They argue that the multiple-choice reading comprehension test is a relevant kind of reading task in that most reading tasks call for constructing meaning from printed text for a specific purpose, and that strategies used by readers while taking multiple-choice reading comprehension test support its construct validity in this sense.

The alternatives to multiple-choice questions, form-response questions, have become widely used in both classroom and large-scale assessments of reading. In formresponse questions, pupils provide their own answer through a written response, rather than selecting an answer from among a number of response options. It is assumed that the pupils construct rather than select answers.

### 3.7.2 The Cloze Procedure

Taylor's studies of reading comprehension (1953) introduced the Cloze Procedure for testing and improving reading comprehension. The name refers to the procedure requiring an operation of closure: the pupil should complete the text by supplying the missing elements, generally single words that have been omitted. The Cloze score is based on the fraction of missing words supplied. The way the reader goes about filling in the gaps is all-important. The use of surrounding context to help the reader guess the missing word is essential to the concept of the cloze procedure. The test helps to measure the ability of the pupil to make use of meaningful context, grammatical structure and style and word patterns to infer the correct replacement. The Cloze procedure is essentially a cognitive test. The reader has to reason and construct suggestions to fill the gap on the basis of evidence derived from the context, but the completion of meaning is a cognitive task. Substantial research (McKenna and Robinson, 1980) has shown that this test is a reasonably reliable and valid method of measuring reading comprehension. It has been shown to correlate
highly with direct assessments of comprehension and also with characteristics that are associated with reading comprehension such as intelligence and vocabulary knowledge. Since the Cloze test requires the reader to fill gaps in the text with a "meaningful" answer, it can be used to determine the degree of reading comprehension in the reader. Since, a fluent reader is able to anticipate what is coming next in a language sequence based on clues in the text, in some respects the abilities used in this test are similar to the ones used for fluent reading. The Cloze test, however, is a more conscious activity requiring a different kind of sampling and matching which will help us to know if the reader has comprehended the material. It could be considered to require the metacognitive ability of the reader as a way to approach the issue of reading comprehension.

Some of the assumptions of the Cloze Procedure have been challenged by some researchers; for example, that the "competent" reader is the one who is capable of accomplishing this task with at least $50 \%$ accuracy. The assumption is that the good reader who understands the text will find it easy to supply the correct item (Ayari, 1998). According to Wolf (1993), this assumption fails to recognize that a reader may be able to provide the "correct" item just by relying on the immediate environment rather than understanding the context of the whole passage. Wolf (1993) also pointed out that although cloze items are quick and easy to construct and score, little is known about the cognitive demands of the cloze the test, thus severely challenging its construct validity.

### 3.7.3 Verbal Reports

Readers' verbal reports of their thinking while reading is aimed at understanding the readers' mental activities during the act of reading. Many scholars have supported the use of verbal reports.(Cohen, 1996 ). The main aim of a verbal
report is to provide subjective data about the cognitive processing. These include data:

1) Self-report which includes the learners' description of what they do, and is characterised by generalised statements about learning behaviour,
2) Self-observation, which involves the inspection of specific rather than generalised language behaviour,
3) Self-revelation, which is a stream-of consciousness disclosure of thought processes as the information is being attended to (Cohen, 1996). Using verbal reports involves a combination of any of these methods.

Cohen (1994) and Aweiss, (1993) suggested that verbal reports are not one measure or research method but encompass a range of techniques for learning about thinking or cognitive processes people use during learning tasks. The techniques mentioned include, for example, self-reports, self-observation, self-revelation, etc. During this test or interview, the main aim is to get readers to say aloud everything that comes to mind when they read and understand a particular piece of text. They can express their thoughts either in their native or their target language. To demonstrate to readers how to think-aloud, they are given training sessions and explanations. To score these tests, the reports are transcribed verbatim into the form of written protocols. Scoring systems are used to evaluate the written protocol (Langer 1985).

Even though verbal reports are important for gaining valuable insight into the nature of the reading comprehension process, they have some limitations. For example, normal reading comprehension is interrupted when the reader has to say out aloud everything that comes to his/her mind. This limitation can be overcome by using control groups to judge the extent to which reading comprehension is interrupted by the think-aloud process (Afflerbach, and Johnston, 1984). Another problem that comes into focus is the extent to which readers can express their
thoughts fluently, especially if it is not their native language. Also, scoring of verbal tests cannot be done directly, but depends on the conversion of the report into a written report. This may lead to loss of some features of spoken discourse (Afflerbach, 1984).

By mapping out the nature of reading comprehension and focusing on the cognitive theories, the first section in this chapter tried to show how the process of reading is a dynamic interaction that involves both the reader on the one hand and the text and the context on the other. The presentation of the different measures of reading comprehension in this section has prepared the way for the following section, which will consider two different models of intervention in dealing with difficulties related to reading comprehension.

### 3.8 Models of Reading Comprehension Interventions:

In this section, the researcher will first describe the vocabulary interventions. These will be described critically based on their conceptual underpinnings, their effectiveness in dealing with reading comprehension in terms of the results they yield when the pupils undergo one of their programmes, as well as their relevance to teaching reading comprehension in Arabic in the fourth grade in the State of Qatar. The researcher will take into consideration all of the major aspects that make the approach applicable to the particularities of Arabic as language.

### 3.8.1 Vocabulary interventions:

Reading comprehension results from engaging with written materials at three main levels: first, the single word level; second, the syntactic and the semantic analysis of the text; and third, the higher order comprehension skills: making inferences from the text, integrating ideas in it , and monitoring one's own comprehension. However, reading comprehension has been described as a decoding ability (Gough and Tunmer; 1986). In recent years, researchers have explored
various relationships between vocabulary knowledge and comprehension (Anderson and Freebody, 1981, Beck, McKeown,1991; Graves, 1987). Vellutino, Scanlon, and Spearing (1995) have highlighted the importance of semantic coding in early reading development. In paired associate learning, for example, pupils more readily learn to associate ideographic characters with verbal labels that are high in referential meaning. It may follow that pupils with verbal-semantic impairments will experience difficulty on such a task. Thus, it is plausible that poor semantic knowledge will constrain the early development of sight vocabulary. Pupils' word recognition capability, vocabulary growth, and comprehension development are essential components of a reading or pre-reading programme. Reading instruction that focuses on the growth of pupil vocabulary results in enhancing their abilities to infer meanings and to comprehend better what they read. As pupils use reading to acquire new information, the role of vocabulary knowledge takes on greater importance. Lack of such knowledge limits their ability to make a connection with their existing background knowledge, and inhibits their capacity to make coherent inferences (Heilman, Blair, and Rupley, 1998). Pupils' knowledge of words can range from simple to complex. According to Beck and Mckeown, (1991 p9), Word knowledge can be viewed as a:
"continuum from no knowledge; to a general sense, such as knowing that mendacious has a negative connotation; to narrow, context-bound knowledge; to having knowledge but not being able to access it quickly; to rich decontextualized knowledge of a word meaning"

Vocabulary instruction is effective in the way that it encourages pupils to discuss, elaborate and demonstrate meanings of new words, and provides varied opportunities for them to use new words outside of their classroom (Beck, Perfetti, and McKeown, 1982). The two important components in vocabulary development
are readers' experiential and conceptual background. The following instructional guidelines reflect the inclusion of this active processing component.

1) Select words for vocabulary instruction that come from texts that pupils will read in the classroom.
2) Base instruction on language activities as a primary means of word learning.
3) Build a conceptual base for learning new words.
4) Provide a variety of instructional strategies to store word knowledge. (Blachowicz and Fisher, 1996).

As far as Arabic language is concerned, the teaching of reading comprehension should tackle the three levels at the same time. Pupils should understand the word meaning, the syntactic and semantic analysis of the text, and the inferences of the text. The nature of Arabic necessitates the adoption of a theory that targets all the levels with special focus on comprehension. Arabic as a language is divided into three types: Classical Arabic, literary Arabic, and dialects. Our focus is literary Arabic as taught in the fourth grade. It is called Modern Standard Arabic and is based on and inspired by Classical Arabic, to which it is similar in morphology, grammar and syntax. Students of Arabic begin by learning how to read parts of the Holy Book and recognise the key words in them. In this respect, the pupils concentrate on meaning rather than words, in order to grasp the holy message of the verse. In teaching Arabic, due to the complexity of the syntactic and linguistic structure of the written passage, teachers focus on the message the text tries to convey. Every text has to be read within a very specific context in order to facilitate comprehension.

The four points cited above from Blachowicz and Fisher (1996) and Blachowicz and Lee (1991) show the importance of vocabulary and its conceptual level. The results of the exploratory survey in Qatar also revealed that pupils have problems in recognising synonyms and antonyms as well as organising ideas
logically. Although the survey suggests the importance of developing word vocabulary, there were further needs identified which a vocabulary approach would not achieve.

The employment of a vocabulary intervention in teaching Arabic in Qatar has been limited to a very few studies in the field of reading comprehension. The use of this approach depends on the teacher's personal competence and understanding of his/her pupils' needs. It is deployed as part of the curriculum and the traditional methods of teaching Arabic. Research conducted in Egypt by Gelgel (1994) addressed vocabulary achievement. Her aim in the study was to improve the reading comprehension process through improving the understanding of the word, the sentence and the paragraph. The programme improved the pupils' achievement as far as sentences and paragraphs were concerned, but it failed to improve their understanding at the word level.

In another study presented by Bin Dania on the efficiency of the vocabulary approach (1995), the researcher concluded that using multi strategies in teaching Arabic is more efficient than the use of the vocabulary approach on its own. According to the results of these two studies, the vocabulary approach plays an important role in improving reading comprehension but fails to identify further needs. For this reason, the next chapter will shed light on the metacognitive approach and show its holistic nature in tackling the process of reading comprehension. Its weaknesses were seen to fall into five general overlapping categories: first the level of word meaning needed to improve comprehension, second, the word meaning taught, third, the number of word meanings that must be known, fourth, the need for additional skill improvement, and fifth the way in which the influence of vocabulary instruction on comprehension is measured. Most vocabulary instruction fails to produce the level of word meaning needed to improve reading comprehension. Reading comprehension depends on having an encyclopaedic knowledge, not merely
knowing a definition (Nagy,1988). According to Even if word meaning was developed adequately, the words taught may have little, if any measurable impact on comprehension. If many of the word meanings were already known or if they could be derived from the context, 'pre-teaching' their meanings would have little effect on differences in comprehension. All words are not of equal importance for understanding a text; some are more central to obtaining meaning. It is possible to understand a passage without knowing the meaning of every word in it. Freebody and Anderson (1983) found that reading comprehension was not decreased significantly when approximately $15 \%$ of the content words were replaced with more difficult synonyms, but Stahl and Miller (1989) report that replacing every sixth content word did have a negative impact on comprehension. If not knowing the meanings of a number of words does not measurably affect comprehension, teaching word meaning may not measurably improve it either. Teaching the meanings of key words might improve the comprehension of selections containing those words, but it may not have great transfer value because the words may have different meanings in other contexts.

Generally speaking, vocabulary programmes that stress breadth of word meaning knowledge provide extended and intensive instruction and learning opportunities, and get pupils actively involved in processing and learning word meanings, seem to have a positive impact on reading comprehension. Overall improvement of reading comprehension may require not only development of a wide range of concepts, but also increasing reading skills and strategies.

## CHAPTER FOUR <br> COGNITIVE PROCESSES AND METACOGNITION


#### Abstract

4.1. Introduction

In this chapter the researcher will elaborate on the implications of the metacognitive approach as a process and a concept. Metacognitive strategies will be mapped, to see to what extent they can tackle the issue of reading comprehension. The importance of the metacognitive approach in the Arab World will be discussed and, finally, the researcher will explore the potential benefits of a metacognitive approach for teaching Arabic comprehension to native speakers.


### 4.2 Cognitive processes and Metacognition

The following section discusses the two major issues of the cognitive processes and the metacognitive strategies the reader uses in reading comprehension.

### 4.2.1 Cognitive processes and the conceptual implications of the metacognitive approach

The last decades of the twentieth century witnessed vast and serious interest in cognitive processes. The objective of such study was to reach an interpretation of how the mind operates, gains knowledge, treats and processes information by defining the cognitive operations used in the processing of information (Al-Zayyat, 1995).

Cognitive theorists tend to classify human cognition into two types, one declarative and the other procedural. The difference between them is that the declarative factor refers to storage in the memory of concepts, rules, strategies and beliefs, whereas the procedural factor is concerned with the ability to use skills and strategies. (Paris, Lipson and Wixson, 1983)

Interested researchers operating in the field of cognitive psychology face difficulties; the most important of which was that cognitive processes are intangible and invisible. Because people tend to be aware of only the products of non-conscious, automatic processes and not the processes themselves, it is difficult, if not impossible, for people to report on them (Ericsson and Simon, 1980). Accordingly it is difficult, if not impossible, for a researcher to know whether automatic cognitive processes reflect people's beliefs in what links should exist between a stimulus and a response, or what links actually exist (Hacker, 1998). Although it is difficult to tap into cognitive processes, understanding of such processes is important in reading generally, and particularly in reading comprehension.

Reading is no longer considered something that a teacher teaches, but a complex and constructive process through which individuals make meaning (Pearson, and Fielding, 1991). In relation to reading comprehension, the schema theory explains how readers put things encountered in a text into slots and create new slots for information that does not fit into existing slots. It promotes a constructionist view of comprehension in which readers construct a coherent model of reading for the texts they read (Rumelhart, 1980).

Readers try to understand the written message of the writer at different levels (lexical, syntactic, semantic, and pragmatic). Reading comprehension is a very active process, and is affected by complex interactions between the content of the text itself, the reader's prior knowledge and goals, and various cognitive and mctacognitive processes (Pressley and Afflerbach, 1995). Processing literature shows that successful comprehension requires a reasonable competence in decoding (e.g., LaBerge and Samuels, 1974), a match (to some extent) between background knowledge and the text information (Anderson, Reynolds, Schallert and Goetz, 1977) along with utilisation of strategies that effectively select, store and retrieve
information. An understanding of reading as involving a set of cognitive processes underpins some reading approaches, which assess and intervene in terms of process strategies, e.g. Reading Recovery (Kirby, 1984),

### 4.2.2 Metacognitive Strategies

An individual's successful reading learning requires more than learning strategies (Brown, 1980). Importantly, the individual must be able to use his/her cognition building, his/her cognition background and his/her cognitive strategies during learning and use them effectively. If pupils are not aware of the balance of their strategies, they will not be able to use them properly and in harmony with the task's requirements. Therefore, successful children may fail sometimes in using suitable strategies to learn, despite their existence within their strategy balance. Learners, in order to use their previous information and their cognition of strategies, and to control them appropriately, need development of metacognition skills (Wong, 1991).

Flavell (1976) was one of the first cognitive psychologists to establish the basis for what is called metacognition, which includes metacognitive processes. He defined metacognition as the knowledge and control of cognitive processes and strategies. Flavell (1976) stated that metacognition expresses an individual's knowledge about his/her self cognitive processes and any cognitive production related to it, or anything related to outputs such as learning characteristics or components related to the preparation and treatment of information. He says that knowledge of metacognition is composed of knowing factors or variables, which interact and operate in certain ways in order to affect outputs. Ability to control cognitive enterprises occurs through the interaction among metacognitive knowledge variables. Metacognitive knowledge refers to knowledge of one's own nature or that
of another as a cognitive processor; a task and its demands, and strategies for accomplishing the task.

Knowing about Knowing Activity is concerned with the individual's perception of his/her own-cognition resources and the ability to adapt between his/her abilities and learning requirements, Flavell (1987) suggested three categories or classes for an individual's knowing about the characteristics of his knowing, i.e. person variables, task variables and strategy variables. Person variables refer to the individual's perception of his/her belief and confidence in his/her learning level, experiences, abilities and information when he/she reacts to different situations by performance or relevant effectiveness.

Task variables are related to the individual's learning, through experience, that various types of tasks require different treatments of information; for instance, memorising a full passage of poetry, word by word, needs more complex preparation and treatment than remembering its basic idea. Knowing our needs for different treatments of information in different tasks helps us to determine suitable cognitive resources in order to achieve them successfully.

Strategic variables include two types of strategies, i.e., cognitive strategies and metacognitive strategies. Cognitive strategies are invoked to help in progress towards a goal, while metacognitive strategies are strategies that are used to monitor the progress of cognitive strategies. Metacognitive knowledge may influence the course of cognitive enterprise, either consciously or through automatic cognitive processes, and may lead to a variety of metacognitive experiences, meaning conscious cognitive or affective experiences that accompany and pertain to an intellectual endeavour (Flavell,1979).

Kluwe (1982) brought a clearer definition to the concept of metacognition by identifying two general attributes common to metacognitive activities: a) the thinking subject has some knowledge about his/her own thinking and that of other persons; b)
the thinking subject may monitor and regulate the course of his/her own thinking. Kluwe linked these attributes to declarative and procedural knowledge, respectively. Kluwe also helped to clarify a distinction between what is cognitive and what is metacognitive. At the cognitive level, stored data may consist simply of domain knowledge, and stored processes may consist simply of problem-specific situations. Metacognition, by contrast, involves what Kluwe calls (Kluwe, 1982 ,p244).
"executive processes, which monitor the selection and application as well as the effects of solution processes and regulate the stream of solution activity"

Following from these early contributions, Brown and Baker (1994) defined metacognition as awareness of cognition and its control, revision and organisation, and argued that the difference between cognition and metacognition is the difference between cognition and understanding of cognition with respect to awareness and suitable usage. Similarly, Tei and Stewart (1985) defined metacognition as:
"having knowledge (cognition) and having understanding, control over and appropriate use of that knowledge".

On the other hand Paris and Newman (1982) assumed that metacognition encompasses three domains:

1) Knowledge and Self Control; this strategy includes three factors:
i) Commitment: which means pupils' commitment to their required task sand duties.
ii) Attitudes: which stimulate positive motivations towards interestedly carrying out an activity. Effective attitudes include diligence, exerting more than minimum effort in dealing with subject knowledge of surrounding resources and how to use them, and treating failure too as a learning experience.
iii) Attention: This includes the child's ability to control his/her attention,
2) Continue and follow-up continuation of attention and maintain it up to the end of the task or learning situation.
3) Knowledge and Control of Process: this element includes:
i) Self-appraisal of cognition.
ii) Self-management of cognition.

According to Paris, Lipson and Wixson (1983), self-appraisal of cognition includes the following three components: declarative knowledge, (an understanding of what factors affect reading), conditional knowledge (readers know when strategies needed and why it will help) and procedural knowledge, (an understanding of why and when to use strategies). The self-management category of metacognition includes planning, evaluation, referring to analysis of task characteristics and personal abilities which affect performance, and finally regulation referring to monitoring and redirection of strategies (Jacobs and Paris, 1987; Cross and Paris, 1988). Self-management refers to metacognition in action, i.e. mental processes that co-ordinate knowledge and resolve problem, for instance, pupils' ability to prepare and arrange new good plans, using multiple strategies, arrangement and revision of executive knowledge, which helps, directs and co-ordinates the process of thinking (Paris and Winograd, 1990).

The focus on self-appraisal and self-management helps in the conceptualisation of learners as individuals, who need to be actively engaged in the orchestration of their knowledge construction (Hacker, 1998).

Insights into the processes involved in self-management, i.e. the processes actually used, were obtained empirically by Sternberg (1987). He used a component analysis model to study "meta-components" or meta-acquisitions. His strategy was to select a problem solving reasoning task that could be decomposed into information processing elements. He then manipulated the elements of the task in such a way as to require more and more information-processing components for the task's solution.

He used a structural pre-cueing task, where subjects were given information about the general structure of the task, in order to study the metacognitive skills involved in choosing between strategies. Response time and error rate were compared between pupils given different kinds of information, in order to obtain information on the role of meta -components in task performance. He found that extra time was spent on the metacognitive skills. Sternberg (1987) viewed meta-componential functioning as consisting of the executive control structure responsible for defining a problem, selecting a strategy, allocating attention and monitoring the solution.

### 4.3 Significance of Metacognition to Reading and Reading Comprehension

As indicated earlier, metacognition can be classified into processes, each of which has implications for reading and reading comprehension.

Metacognitive knowledge, following Flavell (1976) is of three kinds: knowledge of self, knowledge of the task to be performed, and knowledge of strategies. Readers' abilities and their knowledge and understanding of themselves as readers, their purposes and assessment of the reading task, and their knowledge of when and why to use reading strategies, all affect how successful they will be in reading a given selection (Flavell, 1979).

Knowledge of self implies self-appraisal of abilities, self-concept, and selfappraisal of knowledge. A realistic estimate of his/her abilities can direct the child to fruitful responses or inquiries on appropriate tasks. Within the reading task, Paris (1978) sees self-appraisal of knowledge as important because a child needs to be aware of whether or not he/she understands or can remember something, in order to invoke the appropriate strategies to comprehension or recall.

Task variables including the scope of the task, the relationships among task elements, and the purpose of the activity are also important in the reading comprehension task. Before attempting to perform a task, it is useful to appreciate its
dimensions and the conditions that will aid or constrain performance: for example, a long list of words is more difficult to remember than a short list; it is easier to recall, and a story in one's own words than to recall it verbatim. Categorising or constructively organising inter-item relationships (e.g. word associations) and recall. Interpretation of the purpose of the task, will affect the kinds of strategies invoked for dealing with the problem (Baker and Brown, 1984).

As Wong (1991) notes, good readers who have metacognition skills in reading are aware of their reading objective. They differentiate between the tasks required of them, such as reading a text as an assignment inside the class, compared with reading a magazine for entertainment. Their awareness of the reading objective leads to the use of appropriate reading strategies. It also leads the good reader to monitor the situation of his/her reading understanding. Reading for remembering, or studying, involves all the activities of reading for meaning, and more. The reader must take purposive action to ensure that the material is not only comprehensible, but also memorable (Baker and Brown, 1984) not every move a reader considers is deliberate; some skills are automatic and are effective, without being strategic. Obedient responses, accidental responses and following directions are not strategic behaviours. For pupils to be strategic readers, they should know the purpose of the task and the available options.

The third dimension of metacognitive knowledge identified by Flavell (1996) is knowledge of strategies. The importance of strategy use in reading is noted by Brown (1985), who argues that readers need to be able to recognise poorly written texts, infer the meaning of difficult vocabulary from context, and spontaneously draw on whatever background knowledge they have that will help them to understand new content (Brown, 1985). Expert readers construct text meaning by adaptive selection and use of a number of cognitive strategies, such as processing text by using background in conjunction with text cues (Pressley and E1-Dinary,1993). For skilled
readers, the incorporation of strategic behaviours is cued naturally by the text. For example, sub-headings help the reader to make predictions and develop questions about the next section.

The use of metacognitive techniques for improving comprehension skills has been explained from different perspectives by researchers. According to Baker and Brown (1984) metacognition can be described as being composed of two essential elements, (1) knowledge about cognition and (2) the regulation of cognition. The first component, knowledge about cognition, can be explained as the knowledge readers possess about their own cognitive skills and how they can adapt these skills to different reading situations (Brown, 1985). The second component, the regulation of cognition, is the ability of the reader to use self-regulatory strategies to complete thinking processes and reading tasks. Thus, when teaching metacognitive knowledge, it is important to know the strategies available to the reader because they may be directly influenced by instructions by the teacher.

Researchers cite two different kinds of strategies: remedial strategies to resolve comprehension failure, and studying strategies to enhance storage and retrieval (Armbruster and Gudbrandsen, 1986).

In addition to metacognitive knowledge, the ability to engage in metacognitive strategies is central in Sternberg's (1987) metacomponents. Other writers have produced similar models of strategic processes involved in metacognition; although the exact number of strategies and the terminology used may differ, the broad principles remain the same. For example, while Sternberg lists definition of a problem, strategy selection, attention allocation and solution monitoring as key metacognitive strategies (Sternberg, 1987), he stressed the following strategies:

1) Planning: which represents the individual's conscious decision to access the appropriate strategy.
2) Monitoring: which represents the continuous checking of the efficiency of the individual's steps through a certain strategy.
3) Testing: by which the individual assesses what he/she has achieved.
4) Revising: which represents revision of the individual's strategy in the light of new developments or emerging needs.
5) Evaluation: which deals with defining the extent of appropriateness or effectiveness of the strategy used.

Similarly Fisher (1995) clarified metacognitive processes which seem important in solving problems as recognising the problem, identifying and defining the elements of a given situation; representing the problem, making a mental map of the problem, comparing it with others; planning how to proceed; and evaluating progress. Applying these principles specifically to reading, Baker and Brown (1984 p.356) in a classic overview, identify the metacognitive processes in reading as including:

> "(a) clarifying the purpose of reading, that is understanding both the explicit and implicit task demands; (b) identifying the important aspects of a message; (c) focusing attention on the major content rather than trivia; (d) monitoring ongoing activities to determine whether comprehension is occurring; (e) engaging in self questioning to determine whether goals are being achieved; and (f) taking corrective action when failures in comprehension are detected".

Piercy (1997) expressed similar ideas in just three points: pupils determine the purpose for reading, decide what to do to solve a problem while reading, and decide they have achieved their purpose after reading (Piercy 1997). A common element in all these models is planning. Before attacking a problem, it is useful to estimate its difficulty and limits. It is also necessary to generate a repertoire of skills to attack the problem. Failure to produce strategies spontaneously implies a general
failure to be planful. For example, some deliberate action is required if the reader is to recall new vocabulary, or the details of a story, over time (Paris, 1978).

Strategic readers also monitor their activity. Efficient problem-solving requires continual checking of one's own progress in order to determine what is known or not known about the task, during its performance. For example, good readers spontaneously correct grammatical and semantic errors during oral reading significantly more often than poor readers; indeed self-correction rate is more highly correlated with initial reading progress than IQ. or reading achievement scores (Paris, 1978). As regards reading comprehension, it is not common, or necessary, to engage in conscious metacognitive strategies all the time; a skilled reader can proceed on automatic pilot as long as comprehension is progressing smoothly; conscious metacognitive experiences are more likely when progress in comprehension is blocked. One such triggering event is the realisation that an expectation held about the text is not confirmed. Another is encountering unfamiliar concepts. The reader reacts by slowing down the rate of processing, allocating time and effort to the task of clarification, and entering a deliberate, planful strategic state (Baker and Brown, 1984). Monitoring involves the ability to concentrate on the main ideas, to introduce deliberate tactics to aid recall and the concurrent ability to self-test the effectiveness of the strategy being used.

An implicit component of comprehension monitoring is the evaluation of the adequacy of one's behaviour against various criteria, by asking questions such as Does this make sense? Is strategy A better than B? Is this worth the effort?" (Paris, 1978).

To summarise, researchers are in agreement that metacognitive ability is based chiefly on two factors, the knowledge about and regulation of cognition and the purposeful use of comprehension strategies. Effective readers take responsibility for their learning during reading. They do so by understanding how to learn from
reading (Babb sand Moe, 1983). When they learn actively, they are able to employ metacognitive strategies to generate meaning from text (Bristow, 1985). Once they, understand what the strategy involves and how to apply it, they are able to know where and how to look for meaning in a text (Baker and Brown, 1980).

In the next section the researcher discusses studies using a metacognitive approach in order to enhance comprehension.

### 4.4 Studies of Metacognitive Strategies and the Effectiveness of Teaching Intervention

Many studies show that teaching metacognitive knowledge and strategies can increase reading comprehension skills and that independent use of these metacognitive strategies can be gradually developed in people.

Paris, Lipson and Wixon(1983) define the knowledge of cognition as declarative (readers know that a particular strategy is useful and they are able to talk about it), conditional (readers know when a strategy is needed and why it will help), and procedural (readers know how to use comprehension strategies effectively). Paris and his colleagues worked with four classrooms of third and fifth graders to develop a set of reading comprehension strategies (Reading and Thinking Strategy) that would be suitable for elementary school pupils. The initial study included three months of instruction with extensive batteries of tests before and after the instruction. The results of these researches have been published in Child Development (Paris and Jacobs, 1984) and the Journal of Educational Psychology (Cross and Paris, 1988). The results indicate that pupils who were in the experimental classrooms, as compared to pupils in regular classrooms, showed significant increases in their understanding of reading tasks and strategies. Paris (1987) developed a model (Reading and Thinking Strategies programme) which aims to enable pupils to read independently to discover new ideas, and to empower them with the self-confidence to read with enthusiasm, by focusing on three important variables to become strategic
readers: knowledge about the task of reading; control of effective strategies that promote comprehension and motivation. These variables and the programme itself are discussed in the methods chapter, as this programme of metacognitive instruction was chosen for the main empirical study.

Paris and Jacobs (1984) addressed the relationship between cognitive awareness and reading comprehension along with the effects of instructional intervention on comprehension skills. It was suggested by previous experiments that comprehension monitoring came from the basis of inconsistent, extensive attention under various labels such as reflecting thinking, problem solving skills, consciousness raising, and metacognition by researchers. Paris and Jacobs believed that researches have covered up the term reading awareness with all the above labels indicating that poor readers, unlike good readers do not engage in periodic self monitoring, deliberate planning, or application of flexible strategies. In order to test this thesis, Paris and Jacobs undertook an interview study, exploring this relationship, along with instructing younger subjects in the application of reading strategies in the classroom surroundings.

The interview study, with a quasi-experimental design, involved 91 subjects representing all of the children in the four third-grade classes and 92 subjects from four fifth-grade classes. The children came from four schools in the same district, each reflecting one of the diverse socio-economic patterns of the community. Thirteen of the children were eliminated from the experimental sample due to illness, voluntary withdrawal, or moving away from the community. Another factor influencing school selection for the experimental or control purposes was based on the children's Cloze test scores in the previous year's California Achievement Test. The ethnic composition was as follows, $65 \%$ white, $35 \%$ Asian, black, and Native American, with almost equal representation of gender.

The experiment has been carried out using and testing the programme, formerly named 'Informed Strategies for Learning in Regular Classrooms' twice weekly, over a period of four months, promoting reading awareness. Four measures were undertaken for each subject, a structural interview to gauge reading awareness, along with three reading tasks to assess comprehension. The interviews were carried out by experienced male and female researchers in a quiet room at school over a half hour period.

The Gates-MacInitie Reading Test, Level C was administered to all the subjects by the researchers by reading the instructions out aloud for each task, in order to measure the reading ability of eight year olds and Level D for ten-year olds. Literal and inferential comprehension, structural awareness and identification of the main idea were tested by means of four Cloze tests (pre-and post-tests at each level).

The Pearson product-moment correlation between the pre-test and interview measures indicated a significant connection between reading awareness and comprehension across all subjects, especially for 10-year olds. The covariance analysis (using pre-tests as covariates) revealed that reading awareness increased for all subjects over the year.

Paris and Jacobs (1984) concluded that higher comprehension score results were attained by treatment group subjects over control group subjects. The 10 -year olds were superior to the 8 -year old subjects, and the more aware the subjects were, the better results they achieved.

Cross and Paris (1988) conducted a study of relationships between children's Cloze tests, metacognition and reading comprehension which did not contain the organisational deficiencies of the above experiment. The aim of their research was to study reading skill patterns as a function of age and instruction by application of cluster analysis.

The subjects were chosen from a population of third and fifth graders enrolled in four different schools. The cluster sample consisted of 171 subjects, 87 third graders and 84 fifth graders, of which $65 \%$ were Caucasian and $35 \%$ were a combination of Blacks, Asians, and Native Americans. Efforts were made to match the schools taking part on achievement and demographic characteristics.

Like the Paris and Jacobs (1984) study, the essential part of the research was that it was carried out over a period of four months, with twice weekly, 30 minute strategy training (Informed Strategies for Learning). The variables used in the study were the Gates-MacInitie Reading comprehension sub-test, a Cloze procedure, are an error detection task, strategy ratings, and a reading awareness interview.

In the findings from their study, Cross and Paris (1988) came to the conclusion that the intervention had a most favourable impact on the poorest fifth grade readers with a less favourable affect on the better readers. It was also found that ISL training was found not as effective with the third grade experimental group subjects. In contrast, an increase was seen between the ages of 8 and 10 year olds in the correspondence between reading awareness and performance. The study by Cross and Paris found that the children's Cloze tests, metacognition and strategy applications were enhanced by instruction.

Woodward (1991) investigated the efficacy of Paris' (1989) Reading and Thinking Strategies (Level 5/6) on the reading comprehension and metacognitive performances of grades 6 and 7 learning disabled (LD) pupils. In Intervention Period 1, 19 of the LD pupils were instructed over a seven week period by the author/researcher using three modules of the reading and thinking strategies (Blueprints for Reading, Tools for Reading, and Road Signs for Reading). Another 19 LD pupils were assigned to the Control Group and received a more traditional skill-based reading instruction containing no programme of reading strategies. Following the completion of Intervention Period 1, the strategy intervention was
replicated with the Control Group, which then became the second Experimental Group. Pupils received instruction regarding the purpose of reading, the importance of developing reading plans for different kinds of texts, the need to monitor reading progress, and the use of specific strategies to augment understanding and remembering. There were significant differences between the Experimental and Control Groups on standardised and criterion measures of reading comprehension in Intervention Period 1 in favour of the Experimental Group. In Intervention Period 2 LD pupils in the second Experimental Group did replicate the significant improvements achieved by the LD pupils in the first Experimental Group in Intervention Period 1.

Zabrucky and Ratner (1986) focused their investigation on the circumstances under which children usually attend to evaluation and regulation, along with attempting to discover possible reasons for comprehension failures.

Forty children took part in the study, which had a counterbalanced design. The subjects included middle class of third and sixth graders pupils however; the basis for the choice of subjects was not indicated. There were 20 third graders, 12 females and 8 males their mean age being 9 years and out of the 20 sixth graders there were 14 females and 6 males with a mean age of 11 years.

Out of 16 passages, eight narrative passages were taken which consisted of equal length ( 11 sentences) and a word count of 127 per story. Each of the four versions of all eight stories maintained similar content requirement. The context sentence was altered in all versions, making its relationship to the target sentence either factually consistent or inconsistent.

On-line (which was during reading) the children were videotaped for assessment whilst they were reading stories, presented one line at a time. Off-line measurements were acquired by interviews.

When the story was completed the children were encouraged to retell the story in their own words, followed by a probe interview in order to test error detection capability and recognition memory for story information.

The analysis of the on-line comprehension monitoring measures revealed that third graders spent a longer reading time on target sentences than sixth graders. It was also found that the subjects spent longer time on reading inconsistent target sentences than consistent ones. Off-line comprehension monitoring and memory measures indicated that third graders had far more erroneous responses than sixth graders.

Zabrucky and Ratner concluded, as a result of their investigation that approaching comprehension monitoring as a multidimensional complex process rather than a unitary phenomenon was important. Evaluation of on-line measures suggested that all the subjects had partially developed comprehension monitoring abilities; however, off-line verbal assessments did not show this. The collective analysis of their results suggested that all age groups and levels of ability at certain times encountered comprehension evaluation difficulties, This was particularly seen amongst poorer readers and lower elementary school subjects.

### 4.4.1 Metacognition in the Arab World

In the Arab context, metacognition has been defined by Eids (1996). He describes metacognition as the ability to define what we know, and what we do not know. This is represented in the individual's ability to build a strategy to get the information he/she needs, being fully aware of every factor, knowledgeable of the strategy being adopted and the steps followed in order to resolve a problem. Metacognition also involves evaluation of the effects, resulting from such thinking (Eids, 1996) whether during learning or when resolving problems in daily life.

Regarding the value of metacognitive knowledge and processes, Eids (1996) suggests that mostly, pupils carry out instructions given to them, or achieve duties entrusted to them without asking about the reason. They rarely tend to evaluate their ability for achievement. Some children do not know what to do when confronted by any problem; they are mostly unable to explain their strategy when taking a decision. Eids suggest that these difficulties can be alleviated by the use of metacognitive skills and advocates the following strategies:

1) Drafting a work plan.
2) Enhancing such a plan, and keeping it in mind while studying.
3) Referring back to it once again to restudy and review it.
4) Revising procedures to ensure that the work has been done according to the plan.
5) Evaluating the plan based on achievement steps (Eids,1998).

The metacognitive approach is considered particularly relevant to the nature of Arabic learner for a number of reasons, for example, Arabic language learning focuses on understanding the meaning, then the words. Amin (1965), one of the most famous scholars in Arabic, states that 'we as Arabs, we should understand first then read second'. The very nature of Arabic with its rich vocabulary makes it impossible to master the language only through understanding individual words, and easy to catch the meaning of the words when they are put together. Learning Arabic starts with reading the Quran. Each word will open new horizons in the mind of the reader, and so he/she will feel neither heaviness nor frustration, bur rather each repetition of the word increases his/her thought. Teaching Arabic targets comprehension. For this reason, the structure and the logical sequence of the text is what the pupils have to catch. Vocabulary and word recognition comes within the process of understanding the text. In this regard, the metacognitive approach develops models that aim at developing the readers' knowledge and independence in order to understand. In reading the text, Arab pupils have to understand first of all both the implicit and the
explicit demands of the text. The implicit level of what they are reading is more important than the explicit one. One of the best illustrations of this particularity in Arabic comprehension is the great, if not the complete, inadequacy of all the Quranic translations, which. leads to loss of meaning and dangerous misinterpretations of the concepts of the Holy Book. One of the main points that need to be highlighted is the fact that beginning pupils of Arabic encounter the problems of the unlimited multiplicity in vocabulary and the various forms of nouns and verbs. For this reason, the context and the content are the most important means to understand. Comprehension, as the metacognitive approach argues, is based on selecting and understanding the appropriate use of the knowledge the text yields.

The researcher's exploratory work in Qatar discussed in chapter five revealed an urgent need for a programme that tackles the lack of a strategy that puts comprehension as its priority. Teachers, when dealing with problems of reading comprehension, do not recognise the difference between being a good reader, in the sense of a good decoder, and being able to understand what was read. The metacognitive approach, in referring to the individual's awareness and ability to monitor, adjust and regulate his/her metacognitive actions in regard to learning, establishes a way to approach the issue of reading comprehension difficulties from the roots. Teachers in Qatar are not aware of the importance of giving the pupil the opportunity to evaluate him/herself and so recover gradually by addressing his/her weakness. The teachers interviewed had a limited approach to tackling reading comprehension needs, based on repetition, resulting in monotony and lack of motivation on the pupils' side. The researcher believes that what is needed is a holistic strategy that takes into consideration both the nature of the problem and the subject taught, as they are systematically linked

From the exploratory study in Qatar, it seems that what the Arabic teachers in Qatar need is a programme to approach reading comprehension that focuses on the
readers' ability and has a special interest in the semantic aspect of the language. The programme allocated to the fourth grade is based on meaning. It states that pupils have to recognise the words, concentrate on the words' meaning, and know the links between words, sentences and expressions as well as to be independent readers. The comprehensive programme of Reading and Thinking Strategies as first developed by Paris could be useful in this context. It is based on enhancing metacognitive knowledge and was deployed to serve a variety of purposes. It was first used to teach children English as a first language, then to teach English as a second language. It has also been used to teach children with reading comprehension difficulties. The programme's results support its importance as an effective instructional method. It incorporates teaching strategy knowledge and use needed to improve reading comprehension skills of children. Because it has been used in a variety of contexts, the researcher thought that its exploration in teaching comprehension in Arabic could be of value.

## Chapter Five

## The Exploratory Phase of the Study

### 5.1 Introduction

The context of the research was explored initially through reviewing the related literature which revealed that attainment in reading comprehension in Arabic was unsatisfactory and suggested that the teaching methods of Arabic could be largely responsible. However, detailed current information was lacking, regarding pupils' achievement, the current situation of reading comprehension and practitioners' views and opinions about how reading comprehension needs can be assessed and met.

An exploratory survey was carried out to clarify the situation of teaching reading comprehension in Arabic for fourth grade pupils in Qatar, with special emphasis on its difficulties. Interviews were conducted in an attempt to describe how teaching of comprehension is carried out, how reading difficulties are assessed, how comprehension is assessed, how reading difficulties are addressed, and how comprehension difficulties are addressed. This chapter explains the method used to conduct the survey, then summarises the responses to each question individually.

### 5.2 Survey Method

The survey was conducted by means of face to face interview, because this method allows the interviewer to observe non-verbal responses and behaviour, which may indicate the need for further questioning to clarify verbal answers. The interview can be used with many different types of persons. The presence of the interviewer tends to reduce the number of no answers or neutral responses, and the interviewer can press for more complete answers when necessary. In comparison to
questionnaires, interviews usually achieve higher return rates; often as many as 90 or 95 percent of the subjects will agree to be interviewed (McMillan, 1996).

Interviews, therefore, were a suitable method to achieve the purpose of the present study. Oppenheim (1996: 51) suggests the interview is most commonly used at such a stage of research, saying:
> "The earliest stages of the pilot work are likely to be exploratory, and will be primarily concerned with the conceptualisation of the research problem. They might involve lengthy, unstructured interviews; talks with key informants; or the accumulation of essays written around the subject of the inquiry".

The interview is a qualitative investigation which may take structured, unstructured or semi-structured forms, based on a schedule of questions to be asked.

1) Structured interviews involve a fixed set of questions that the researcher asks in a fixed order. These are based on a carefully worded interview schedule and frequently require short answers or the ticking of a category by the investigator. They are often like a written questionnaire in form. However, this form gives the interviewee little space for new insights or deep thinking. The structured interview is useful when a lot of questions are to be asked which are not contentious or deeply thought provoking (Mcmillan, 1996; Cohen, Manion, and Morrison, 2000).
2) The Unstructured interview includes a number of topics to cover but the precise questions and their order grow from the exchange with the respondent. Its questions are open-ended, allowing interviewees to say as little or as much as they like. Unstructured interviews or what are called 'depth interviews' require the interviewer to have considerable skill and training in the necessary techniques and to be well-informed about their procedures. Moreover, this form of
interview is highly subjective and time consuming. (Macmillan, 1996; Cohen, Manion, and Morrison, 2000).
3) The Semi-structured Interview is the type most favoured by educational researchers as it allows respondents to express themselves at some length, but offers enough shape to prevent time being wasted in collecting irrelevant information. Semi-structured interviews involve asking a series of structured questions, but in this case much more latitude is permitted. Often there is an initial question, followed by probing more deeply using open-form questions to obtain more relevant information. Semi-structured questions do not offer predetermined structured choices. Rather, the questions are open-ended yet specific in intent, allowing individual responses. The questions are objective, and produce comparable information, yet they allow probing and clarification. (Macmillan, 1996; Cohen, Manion, and Morrison, 2000).

For the purpose of the present study, the researcher employed the semistructured form ending with one open-ended question in order to obtain free information in addition to that obtained by the semi-structured questions

### 5.3 Objectives of the Interview

The researcher conducted the semi-structured interviews in order to:

1) Clarify the current situation of teaching reading comprehension in Arabic for fourth grade pupils in Doha public schools.
2) Find out how reading and comprehension are assessed.
3) Find out how reading comprehension needs are identified.
4) Find out what techniques and strategies available to teachers to assess or to deal with the reading comprehension needs.

The following sections describe the procedures for constructing and conducting these interviews.

### 5.4 Constructing the Interview Questions

Several sources were used to generate the interview questions; first, a review of relevant literature; second, the researcher's experience, and third, conversations with educators including university professors in Qatar University who specialised in teaching Arabic, Arabic education supervisors, specialists in special education at the university and the MOE, and teachers. Thus, the researcher collected a large pool of questions that were then refined and restated in the form of semi-structured questions.

Thereafter, the first draft of questions was revised with the help of the present research supervisor and other university professors in Qatar. Three specialists translated the questions and their translations were given to a university professor of English who had experience in translation, who was asked to revise them and reproduce one version. This final version of the questions was submitted to a panel for validation of the instrument.

The interview had to be standardised in terms of validity and reliability. Validity refers to the knowledge and meanings that are reported as correct by the informants of the study. Reliability is proven if similar observations are made by different researchers on different occasions.

Validity was examined by submitting the interview questions to a panel including 16 specialists: six university lecturers (2 Arabic curriculum and teaching methods, 2 Special Education and 2 Arabic Language). It also comprised four teachers of the fourth grade; four educational supervisors and two Arabic curriculum development specialists. A copy of the first draft of the interview questions with an introduction about the purpose of the research in general and the objectives of this
instrument in particular was submitted to the panel. They were asked to evaluate this instrument in terms of the clarity of the statements, appropriateness of each item to elicit the information, whether each item belonged to the specified topic area and any proposed amendment to each item. A week later, feedback on the questions was received, as follows:

1) Eight of the panels' members proposed keeping the stems of 10 items unchanged.
2) Six of the panel members recommended amending four items in terms of their appropriateness and belonging to the area of the interview.
3) Two members of the panel did not recommend any change.

Thus, the interview questions were finalised in open-ended forms without point scale, so that the interviewees were given the chance to speak freely

The Reliability of this instrument was examined by piloting it on a sample selected randomly from the population of this study. Although the size of the sample was small, researchers accept such a size for piloting an instrument. This pilot study was administered to nine teachers of the fourth grade chosen randomly from three schools in DDE ( 3 teachers from Girls' schools, 3 from Pioneer schools and 3 from boys' schools).

The schedule for a single administration of these pilot interviews was arranged in advance with the interviewees. The researcher began each interview by briefly explaining the research objectives and assuring the interviewee that her/his responses would be treated in confidence. The researcher wrote down the responses precisely, paying attention to paralinguistic features, and avoiding any influence on his/her ideas. Thus, all the interviews were completed.

The responses were reviewed with the help of two university professors in Qatar. As a result, the 14 questions were rewritten, produced and printed in the final
form (see Appendix 1) and became ready for use within the actual sample of interviewees as described below.

### 5.5 Conducting the Interviews with the Actual Sample

The interviews were held with to 24 teachers of the fourth grade at 12 schools (four girls' schools, four pioneer schools and four boys' schools). These schools were selected randomly using the clustering technique according to the area and type of school. The sample contained 16 female teacher (eight of them teaching boys at the pioneer schools) and eight male teachers. Their experience in teaching Arabic and in teaching the fourth grade ranged from ten to fifteen years.

Prior to conducting the interviews, the following actions were taken:

1) Official permission was obtained to conduct the interviews.
2) The selected teachers were contacted in advance to arrange an appointment at a time convenient to them.
3) For convenience and to save time, effort, cost and travel, the interview questions were sent to the teachers in advance, so they could understand the purpose of the interview and prepare their responses. All interviews were conducted in the schools, the researcher herself conducted the interviews with each interviewee, starting by introducing the significance of the research and significance of the informants' contribution to it. They were assured about the confidentiality of the information they provided and every effort was made to create a friendly, relaxed and pleasant atmosphere. All efforts were made to lead the interviews effectively, objectively and nondirectively.

A request that the interviews be audio-taped was made, along with writing down notes was sufficient. An alternative approach to tape-recording is that of note
taking. Bell (1993, p. 96) advises interviewers to learn to devise shorthand systems of their own. She continues
"As long as notes can be written up immediately, or very soon after the interview ends, it is possible to produce a reasonable record of what was said in the key areas."

On balance, the researcher was of the view of many researchers (Bell 1993; Verma and Mallick, 1999; Vulliamy, 1990), that using a tape-recorder would save time and avoid stopping the interviewees in order to complete some notes. It also can be useful to check the wording of any statement the researcher might wish to quote and to check that notes are accurate. It enables the researcher to listen several times in order to make full understanding and to identify all the ideas given. Taperecording can also be useful to analyse the interview content and ensure the reliability of the analysis by asking someone else to analyse the forms.

The fullest possible notes were taken during the interviews, then written up immediately afterwards. Each interview took from 50 to 60 minutes. Each day, one or two interviews were conducted; it took around 15 days to finish all the interviews. The data collected by qualitative and quantitative tools in this study were analysed using the statistics proper for each tool.

### 5.6 The Interview Analysis and Results

The data obtained from the interviews were analysed although qualitative analysis is less abstract than statistical analysis and closer to raw data, which are relatively imprecise, diffuse, and context-based, and can have more than one meaning (Neuman 1994).

In analysing the interviewees' responses, the present study made use of the principles of the grounded theory analysis of Glaser (1978) and elaborated by Turner and Martin (1984). In line with these principles, a matrix of comments was made
according to each category of the respondents against each question asked and the main ideas that emerged. Then, agreements, similarities and differences among these ideas and viewpoints were highlighted as shown in the following sections.

## Question 1: What is happening in reading at this level?

This question aimed to find out the reading strategies the teachers focus on in their teaching of reading to the target pupils. The interviewees' responses are summarised in the following table.

Table 5.1: The Reading Strategies.

|  | RESPONSES | Frequency | $\%$ |
| :--- | :--- | :--- | :--- |
| 1 | Reading | 20 | 100 |
| 2 | Silent reading | 12 | 60 |
| 3 | Oral reading | 16 | 80 |
| 4 | Class discussion | 20 | 100 |
| 5 | Underlining the new and difficult vocabulary | 16 | 80 |
| 6 | Preparing the reading passage | 14 | 70 |
| 7 | Dividing the passage into Paragraphs | 12 | 60 |
| 8 | Raising questions | 11 | 55 |
| 9 | Writing the ideas on the blackboard | 10 | 50 |

This table shows that:

1) All the interviewees agreed on the 'reading' of the text silently or orally at the beginning of each lesson and, 'class discussion';
2) They varied in the extents to which they reported the use of 'preparing the reading passage', 'dividing it into paragraphs', 'raising questions' and 'writing the ideas on the blackboard'.

These results indicate that the major concerns of the teachers were in teaching the basic skills of reading and class discussion, while other important processes were oral reading and underlining the new and difficult vocabulary.

Question 2: What kind of Reading Comprehension is provided for pupils at this level?

Teachers' responses revealed that three main areas were covered. At the semantic level, pupils were taught to understand and recognise the meanings of words and their synonyms and antonyms as well as make sentences using the newly learned vocabulary. In the area of syntax, pupils were taught to recognise the two predominant sentence types in Arabic grammar, namely, the verbal and the nominal; they were taught the use of demonstrative adjectives and pronouns; and they learned word inflections. Regarding the ordering of ideas in the reading passage, they were taught to give a new title and the main ideas of the passage.

The pupils are taught the skills and sub-skills related to the above-mentioned areas to enable them to master the true meaning of the reading passage and to categorise the passage's genre. This might be attributed to the nature of the Arabic curriculum the teachers are used to teaching for the fourth grade, since these are the major objectives of teaching Arabic at the primary stage in Qatar.

Questions 3: What skills of Reading Comprehension are taught at this stage? (I.e. what do you teach about the reading process?)

## Question 4: What are the different levels of teaching comprehension?

These two questions were treated as a single question when translated into Arabic. The teachers' responses were similar as they were using the same textbooks of the same curriculum. This curriculum specifies the reading skills that should be taught and the levels of the Reading Comprehension at the target stage, in terms of learning objectives, as illustrated in the following list.

Table 5.2: The Ministry's list of the comprehension skills and levels

|  | Skills of reading: <br> level of knowledge: Comprehension |
| :--- | :--- |
| $\mathbf{1}$ | Understand the vocabulary from the context |
| a | Recognise some of the new vocabulary and its meaning in the written passage |
| b | Match between the vocabulary and its meaning in the written text |
| c | Recognise synonyms |
| d | Use some of the vocabulary in meaningful sentences |
| 2 | Differentiate between the different structural types |
| a | Recognise the different types of the sentences, verbs, structures |
| b | Recognise demonstratives, relatives, and interrogative words. |
| c | Give examples of inflections |
| $\mathbf{3}$ | Express differently: structurally and semantically from one meaning to the <br> other in the written text |
| a | Change verb-tense |
| b | Change from singular to plural |
| c | Change from verbal to nominal |
| 4 | Recognise the pronunciation of letters, words. |
| a | Recognise the pronunciation in written words, |
| b | Recognise the similar sounds, like s, $z$, |
| c | The soft pronunciation of certain words |
| d | Recognise silent letters such as, alif, waa al jamaa, lam shamsia |
| 5 | Understand what he/she reads |
| a | Organise the ideas logically. |

The teachers' responses were coded and associated to the two questions as a single one. They agreed that the skills and the levels were dictated by the curriculum as shown in the above list. As mentioned earlier in this chapter, the MOE applies a centralised system of education, i.e. there is one curriculum for every grade and the teachers must stick to it.

Question 5: What importance do you place on teaching comprehension eg. how much time do you devote to it?

The importance of Reading Comprehension was measured by the time allotted to teaching this skill for the fourth grade. The responses were analysed and are presented in the following table.

Table 5.3: The time devoted for teaching the comprehension skill

|  | RESPONSES | Total | \% |
| :--- | :--- | :--- | :--- |
| 1 | Spend from 15-30 minutes | 10 | $50 \%$ |
| 2 | Spend whole lesson | 2 | $10 \%$ |
| 3 | Prepare text at home | 8 | $40 \%$ |

This table shows the relatively low importance attached to Reading Comprehension as reflected in the time allocated to it. All the interviewed teachers agreed that the time allocated for comprehension of a given passage depends on the pupils' ability. However, time spent on it depended on the teacher's own understanding of the Reading Comprehension task objectives; hence, their answers were different. Some were of the view that in Reading Comprehension, they should teach the meaning of the text i.e. understanding the general idea of the text, while others thought they should teach the pupils to understand the text i.e. to go deep into the details of the text. Half of the teachers said they spent from $15-30$ minutes explaining the passage to the pupils. Two said they spent the whole lesson on studying the text. Eight said that they made the pupils prepare the text at home, so it did not take a lot of time to go over it in class.

This difference could be attributed to the fact that reading is dealt with as part of the language curriculum of this grade. There is no special focus on Reading Comprehension compared to other skills, which are taught integratively.

Question 6: Which method or methods do you use to teach pupils Reading Comprehension?

The respondents' answers to this question were coded and analysed and presented in the following table.

Table 5.4:Methods used by the Teacher to Teach Reading Comprehension.

|  | Method | Frequenc <br> $\mathbf{y}$ | Percentage |
| :--- | :--- | :--- | :--- |
| 1 | Repeating the passage many times | 20 | 100 |
| 2 | Dividing it into paragraphs | 20 | 100 |
| 3 | Explaining the new vocabulary | 20 | 100 |
| 4 | Discussing the passage | 20 | 100 |
| 5 | Decoding | 15 | 75 |
| 6 | Evoke the pupils' attention | 15 | 75 |
| 7 | Engage in dialogue | 13 | 65 |
| 8 | Question to check understanding | 15 | 75 |
| 9 | Reward the pupils | 14 | 70 |
| 10 | Understanding the main idea | 10 | 50 |
| 12 | Summarising the passage | 5 | 25 |
| 13 | Acting | 2 | 10 |

This table indicates that all the interviewees agreed that they repeated the passage many times, divided the passage into paragraphs, explained the new vocabulary and discussed the passage. On the other hand, their answers were various when they were asked about other strategies. Some, however, gave more specific details, saying that they used decoding, evoked the pupils' attention, engaged them in dialogue and then asked a question to check understanding.

The points on which they had low agreement and different views were putting the passage into practice such as 'acting' and 'summarising the passage'. Two teachers favoured going through all the steps listed, ending with acting.

Question 7: How do you identify that a pupil has a Reading Comprehension difficulty? When discovering that a pupil has a Reading Comprehension difficulty, how do you measure it?

Question 8: Do you consider this adequate? If so, why? If not, why?

The teachers said they spotted these difficulties during the process of reading, questioning and discussion. They had no specific means of assessing the nature of extent of difficulty, as the only measure available was the pupil's achievement in examinations. Some teachers expressed the view that pupils should understand the text; if they did not, it was because they were not paying attention or had not done their homework.

This understanding of the reasons for difficulty in comprehending was reflected in the recovery methods used, which were the subject of the next question. The interviewed teachers agreed that assessment is based on the pupils' performance in the classroom and their achievement in the school tests. Teachers deploy a method of assessment, which is not really effective. Teachers always think that pupils' bad performance is due to laziness.

## Question 9: If you know that a pupil has a Reading Comprehension difficulty, how do you deal with it?

Strategy methods focused predominantly on making the pupil re-read the passage, although some teachers said they discussed with the pupil to try to find out the reasons for his/her weakness. The teachers felt, however, that they could not do more than this, because of lack of specialist knowledge. Some interviewed teachers said that they employed the repeated reading strategy. Repeated reading can be an effective technique to facilitate the Reading Comprehension reading. According to Cairney (1986) and Meese (1994), individuals who re-read a known passage never comprehend it in exactly the same way. He stated that because we change, and the context in which we read changes, the meaning we create also changes. Anyone who has re-read a novel a number of times knows that each time they read it their understanding of it changes and develops.

Question 10: Are your methods used for dealing with Reading Comprehension difficulties effective? If so, why? If not why?

All the interviewees said that their methods were effective with some pupils but did not work with others. Some teachers thought that their methods did not work because these pupils might have another problem. Teachers could not adopt nor innovate new methods with these pupils because of time pressures and the number of pupils in the classroom and the compulsory plans set by the MOE.

## Question 11: Do you inform and involve the pupil? What role do they play?

The teachers said they informed parents of any problems, though they did not indicate any specific strategy for involving parents in training activities.

Regarding discussion of problems with the pupil, interviewees indicated that they drew the pupil's attention to comprehension difficulties, but tried to do so without worrying him or her.

Question 12: What do you feel you need in order to help pupils with Reading Comprehension difficulties?

Most of the interviewees said that in order to help pupils with reading difficulties they need helpful assessment methods to apply when they face such difficulties. They also need training about how to deal with these kinds of difficulties. The support of MOE specialists in reading at the school level or at the level of the MOE department of special education was also suggested to provide the teachers with such helpful methods.

Question 13: Is there anything else, which you think, may be useful for me to know about comprehension teaching here?

The interviewees described various experiences in teaching reading. Some of them liked the idea of a standard assessment that they could use by themselves. Others wanted to know about different approaches in teaching Reading Comprehension.

### 5.7 Checklist

After these interviews had been conducted, it was apparent that there was no technique for the assessment of the pupils' difficulties in Reading Comprehension to being used by the teachers. Thus, the researcher adopted the learning outcomes described in the national curriculum of Arabic for the fourth primary grade in Qatar as a checklist to identify the difficulties the pupils' face while reading. This checklist was used to assess the pupils' Reading Comprehension needs as viewed by their teachers. This checklist was considered likely to be useful because it was based completely on the learning outcomes taken from the national curriculum of Arabic in Qatar. This checklist contained 18 items with yes/no answers to each item (see appendix 2). It was administered to 20 teachers of fourth grade pupils. Their responses are presented in the following table.

Table 5.5: The Checklist Responses.

|  | Statement | Responses | $\%$ |
| :--- | :--- | :--- | :--- |
| 1 | Match between the vocabulary and its <br> meaning in the written text | 14 | 70 |
| 2 | Recognise synonyms and antonyms | 12 | 60 |
| 3 | Organise the ideas logically | 11 | 55 |
| 4 | Use some of the vocabulary in meaningful <br> sentences | 10 | 50 |
| 5 | Recognise main idea | 8 | 40 |
| 6 | Recognise supporting details | 6 | 30 |
| 7 | Recognise the different types of the <br> sentences, verbs, structures | 6 | 30 |

The above table shows that one of the most important difficulties faced by the pupils was 'matching between the vocabulary and its meaning in the written text'. They were also said to have difficulty in recognising synonyms and antonyms, organising ideas logically, using some of the vocabulary in meaningful sentences, recognising main ideas, and recognising different types of the sentence, verbs and structures. The problems checked by the teachers emphasised the idea that those pupils with learning difficulties lacked the ability of fluent decoding.

### 5.8 Summary

Based on the results of the exploratory interviews with teachers in Doha, it seems that the target pupils have some common difficulties in Reading Comprehension, but that no systematic method of diagnosis was in use. Teaching appeared to focus predominantly on decoding and analysing sentence structure. Training efforts were largely confined to repeat reading and class discussion, though teachers realised that this was not successful with all pupils. However, they lacked training and confidence to attempt other strategies.

In the light of these preliminary insights, together with the theoretical background presented earlier, an experimental study was carried out in the introduction of metacognitive strategies, with a view to addressing pupils' Reading Comprehension difficulties.

## CHAPTER SIX

## RESEARCH METHODOLOGY

### 6.1 Introduction

This chapter explains the procedures implemented to develop and adapt the research instruments. The literature review indicated the need to adapt the measurement instruments to be relevant to the Reading and Thinking Strategy programme for the Qatari context, and to develop other measures of more general reading comprehension appropriate to the Qatari context which would target skills taught in the Reading and Thinking strategy programme.

Therefore, in the pilot study phase, the researcher developed some research instruments that conformed to the objectives of this study and adapted others to this study. These tools were used to assess the effects of the experimental programme on Qatari fourth grade pupils and addressed their use of metacognitive strategies, their reading comprehension performance and achievement, and their Attitude. The study phases aimed to assess the reliability and validity of the data collection tools, and to validate the experimental programme used in the main study phase to test the effectiveness of the reading comprehension programme.

This chapter describes the procedures that were undertaken in completing both the pilot- phase and the main study phase. After restating the purpose of the study and the questions it was to answer, it explains the overall research design. The experimental programmes, and the tools developed to measure its impact, are described. The target population of both the pilot-phase and the main study phase are identified and the sampling arrangements, procedures and outcomes of the pilot
studies are discussed. The main study sample is described, the procedures adopted in carrying out the experimental design are reported, and the data analysis techniques employed are explained.

### 6.2 Restatement of the Purpose and Research Questions

The purpose of the main study was to describe the effect of teaching a Reading and Thinking Strategies Programme to fourth grade pupils. As this study was the first of its kind in the context of reading in Qatar, it entailed the in-depth empirical examination of the effectiveness of the teaching strategy for reading comprehension in Arabic based on metacognitive theory.

The pilot study and the main study addressed the research questions restated below:

1. What assessment techniques may be helpful in understanding reading comprehension?
2. Does the Reading and Thinking Strategies programme adopted in this study affect pupils' performance on reading comprehension?

In the next sections the researcher will explain the methods used to answer the research questions.

### 6.3 Research Design

One of the purposes of the present study was to examine the effectiveness of a 'Reading and Thinking Strategies' programme on reading comprehension strategies used in Arabic by fourth grade pupils (girls) at Doha schools. The reading comprehension work was adapted from similar kinds of work used by Paris and his colleagues.

Data relevant to the research questions were collected by both quantitative and qualitative approaches, as follows:

1) Quantitative Data - A quasi-experimental design (described in more detail later) was adopted to test the impact of the reading strategies programme. Base data on the sample experimental and control groups (to address, as far as possible, equivalence between them), and pre-post data were obtained by several quantitative measures, namely, a reading comprehension test, a cloze test, an Index of Reading Awareness and of Self-Perception. These multiple measures aimed to obtain data on the way pupils thought about reading,
2) Qualitative Data - To obtain rich data on the way pupils thought about reading, both generally and during a reading task, metacognitive interviews and the "think aloud technique" were used. Combining quantitative and qualitative procedures in this study enabled more information to be obtained than by using either one alone. (Jaber and Kadam, 1995)

The experimental method was applied to study the relationships between independent (the programme) and dependent (the measurement) variables. A quasiexperimental non-equivalent (the term non-equivalent is used here because it is often likely that the two groups selected are not equivalent, although they are as similar as they would be if we assigned them through random lottery) group, pre-test, post-test experimental-control groups design was used for many reasons (Gribbons, and Herman, 1997). First, because it aimed to minimise threats to internal validity such as history and maturation (Verma and Mallick, 1999). Second, the manipulation of variables was possible. Third, using pre-tests was possible, and finally, using the control group was possible. The use of pre-tests allowed post-test differences to be attributed to the intervention and not to initial differences between the groups. The use of a control group allowed pre-test and post-test differences to be attributed to the intervention and not other variables such as maturity.

The following is the research experimental design paradigm that was used in the present research:

| Experimental | $\mathrm{O}^{\mathbf{1}} \mathrm{X} \quad \mathrm{O}^{2}$ |
| :--- | :--- |
| Control | $\mathrm{O}^{\mathbf{1}} \quad \mathrm{O}^{\mathbf{2}}$ |
|  | X the intervention <br> - The regular instruction |

The administration of an experimental/control group design helps to determine the effect of the suggested programme in improving the reading strategies. Borg and Gall (1989:670) mentioned that this design:
"Involves three steps: first, the administration of a pretest measuring the dependent variable; second, the application of the experimental treatment (independent variable) to the subjects; and finally, the administration of a post-test measuring the dependent variable again."

In this study, the independent variable was the method of intervention. The dependent variables were the measures of (1) reading achievement; (2) reading comprehension test; (3) cloze test; (4) reading awareness questionnaire; (5) selfperception questionnaire; (6) metacognitive interview and think-aloud passage. The metacognitive intervention (The Reading Thinking Strategy) was addressed to the experimental group pupils. Meanwhile, the control group continued with their regular instruction in reading comprehension. In the following section, the researcher will describe the regular instruction use for teaching Arabic, followed by the intervention programme.

### 6.4 The Traditional Programme

The following instructional method is the traditional method that has been used to teach Arabic and is currently in use, as seen revealed in the exploratory study of teachers teaching Arabic to fourth grade students.

1) The pupils read the text silently and then underline the difficult vocabulary words and new concepts which they do not understand.
2) The teacher reads the text aloud and the pupils follow the reading in their own textbooks.
3) The teacher then writes down the difficult words and new concepts on the chalkboard in two different categories.
4) The teacher then explains the meaning of the words and the context in which they can be used. In addition, he/she explains and defines new concepts.
5) Some pupils are then asked to read different portions of the text, and the teacher corrects their reading mistakes.
6) Arabic is an inflected language (i.e.- case markers are assigned to constituents to give different semantic meanings); the pupils are therefore asked to inflect some chosen sentences of the text.
7) Then the pupils silently reread the text and write down its basic ideas.
8) The teacher heads a general discussion of the main ideas of the text and then summarises these on the chalkboard.

### 6.5 The Experimental Programme

This section describes the reading programme selected and the procedures involved in adopting and translating it for this study.

### 6.5.1 Description of the Reading and Thinking Strategies Programme

The programme is composed of a Kit for levels $3 / 4$ written by Paris and
published by D.C. Heath and Company (1989). This Kit focuses on teaching different cognitive strategies represented in:

Knowledge about Reading: Often, comprehension is impeded by readers' misconception about the reading process, e.g. thinking that speed is the only goal, or
that re-reading is only for those not smart pupils do not communicate about reading as a thinking process, such misconception go undetected. Pupils need to know that the goal of reading is construct meaning, that there are many kinds of texts and many purposes for reading. They also need to know what thinking strategies are how they work, why they are useful, and when they should be used.

Self-controlled thinking: Teachers need to encourage pupils to incorporate their knowledge about reading tasks and awareness of strategies into effective reading behaviour. Controlled thinking includes evaluating the task at hand and making plans to direct their efforts; summarising ideas and checking understanding, using context, re-reading and scanning ahead, knowing when to use a strategy and when to seek help; and reflecting or the understanding and enjoyment gained, evaluating whether the reading purpose was achieved.

Motivation: Without motivation to use knowledge about reading and controlling thinking, pupils will not become strategic readers. Telling pupils that if they use good thinking strategies, they will be better readers, and rewarding their efforts in using thinking strategies, encourages positive feelings about reading. These in turn encourage pupils to acquire more knowledge and exert more control over their reading. This approach makes the readers an active part of the strategy itself. The authors presume that this helps in making them aware of the problems first, and then giving them the opportunity to monitor and evaluate their progress. The reading and thinking strategies programme designed to be used by any classroom teacher with a minimum of preparation time.

These cognitive strategies are represented in nine modules and 20 lessons designed for the $4^{\text {th }}$ Grade. Each module was designed to be used by teachers independently. Each module emphasises metacognitive strategies and includes three separate half-hour lessons, the last one being a bridging lesson.

The standard format is as follows:

Topic
Strategy description
Rationale
Goals
Bulletin board
Lesson A
Lesson B
Lesson C
Stories/ passages
Worksheets

The lessons of each topic in the programme (described below) were each presented in a large colourful, bulletin board poster, a pupils' workbook with reading materials and work sheets to assess strategy knowledge, along with scripted lesson cards. The focus and task of each reading comprehension skill training module is summed up in Table 6.1 (the whole programme with its complete components is shown in appendix 9):

Table 6.1: Summary of the Modules' Contents

| No. | Focus | Title of the Task |  |
| :--- | :--- | :--- | :---: |
| $\mathbf{1}$ | Awareness of reading goals, plans and strategies |  |  |
| a | Goals and purposes of reading | Hunting for reading treasure |  |
| b | Evaluating the purpose of reading | Be a reading detective |  |
| c | Comprehension strategies | A bag full of tricks for reading |  |
| d | Forming plans | Planning to build meaning |  |
| e | Review |  |  |
| $\mathbf{2}$ | Components of meaning in text |  |  |
| a | Kinds of meaning and text content | Turn on the meaning |  |
| b | Ambiguity and multiple meanings | Hidden meaning |  |
| c | Temporal and causal sequences | Links in the chain of events |  |
| d | Clues to meaning | Tracking down the main idea |  |
| e | Review |  |  |
| $\mathbf{3}$ | Constructive comprehension skills |  |  |
| a | Making inferences | Weaving ideas |  |
| b | Preview and review of goals and tasks | Surveying the land of reading |  |
| c | Integrating ideas and using context | Bridges to meaning |  |
| d | Critical Reading | Judge your reading |  |
| e | Review |  |  |
| 4 | Strategies for monitoring and improving comprehension |  |  |
| a | Comprehension monitoring | Signs of reading |  |
| b | Detecting comprehension failures | Road to reading disaster |  |
| c | Self-correction | Road repair |  |
| d | Text schemas and summaries | Round up your ideas |  |
| e | Review | Plan your reading trip |  |
|  |  |  |  |

For each lesson, detailed information is provided about strategies, metaphors, and how to foster the group's discussion of them.

The informed self-control-teaching model was used as the basis for formulating scripted lesson plans for each lesson. During the course of the lessons, the pupils were acquainted with the purpose and the importance of the strategy, and its correct application. The teacher designed strategies, which helped to clarify the thought processes involved in creating meaning from text. Group discussion with pupils about their thoughts during the reading process also helped in nurturing metacognitive awareness. In addition, the pupils were supported with the use of
supervised practice during the lesson itself or in subsequent lessons, if needed, which provided them with constructive feedback on their reading process. Pupils were also encouraged to read literature independently. Pupils were also involved in a variety of reading assignments, which were assessed by comparing them to standard self or group assessments. Cue cards were used to help pupils acquire understanding of strategy and its use. These cue cards contained questions or facts pertaining to important points in the module concerned. At the start of every lesson, the strategy was explained to the pupils, and the pupils were asked to commit the strategies to memory. Then, these strategies had to be reproduced on the worksheets of the pupil's handbook. When the pupils were able to reproduce the strategy, the prompt cards were turned face down. The pupils were able to examine these cards at any time if they needed them.

### 6.5.2 Translation and Adaptation

Prior to adapting the programme, it had to be translated from English into Arabic and after that from Arabic to English, and then both interpretations were compared. Three professional translators undertook this task. To validate the Arabic version of the programme, it was submitted to a panel of 15 judges. This panel comprised four university lecturers and senior lecturers of Arabic language, four of Arabic curriculum and another three in educational psychology; six Arabic education supervisors from the MOE and eight teachers of Arabic at the primary stage in Doha schools. The judges were asked to revise the text to ensure its accuracy, clarity and suitability for teaching reading comprehension in the Doha schools. The feedback from the judges suggested three types of changes summarised below so that the programme would be appropriate to the target pupils.

1) General changes: the names of the characters and cities were changed to Arabic names and cities, e.g.:
i) On p 3 of the workbook, the title of the story was changed from 'Barnaby the Baker' to 'Yousif the Baker'.
ii) The name of the city of Baltimore was changed to Al-Basra.
2) Specific changes: in some cases, when a poem was translated into Arabic, it lost the poetic theme or character. Therefore, the poem was changed into prose without losing the idea or theme behind it. For example, in the case of the poem on page 2 , the dialogue was changed from a poem to a prose form without losing the meaning.
3) Culture changes: in some cases, certain events and celebrations, which take place in the western World, were replaced with analogous events which take place in the Arab World. For example, the event of 'Halloween' was changed to the Arab event of 'Karankoho' which comes in the middle of the Holy month of Ramadan.

### 6.6 Development and Adaptation of the Research Assessment Tools

Since reading comprehension involves various strategies before, during and after reading a text, various tools were used to collect the required data, following by a framework for assessment based on the objectives set for the programme.

The next section discusses and describes the instruments that the researcher used to collect her data. It also discusses the procedure used to pilot the instruments of the study. Since this study was the first of its kind in the context of reading in Qatar, specific instruments were developed by the researcher to meet the needs of the present study. An important concern for the present study was to develop instruments that were consistent with the intervention programme used in the study. Based on the
literature review it was found that interaction of testing and treatment occurs when the testing in combination with the treatment produces an effect. Another reason for developing these assessments was to provide measures suitable to the Arabic context, when measuring comprehension skills related to the programme. In the next section the researcher will describe the various measures which are used in the study.

1) Assessments which were developed by the researcher for the needs of the study (Reading Comprehension Test, Cloze Test, and Think-aloud Tasks). The following resources guided the development of the measures which the researcher constructed for the needs of the study :
a) the review of Arabic and English literature relevant to reading, reading comprehension and reading achievement (which were the focus of the current study); for example, studies conducted by Cohen, (1983), Brown, (1985), Bond ,Tinker, Wasson, and Wasson (1984), Paris, Cross, and Lipson, M.Y.(1984), Paris, (1987), Cross, David, and Paris (1987), Galjal (1994), Angelo, and Cross, (1995), Shoemaker, (1998);
b) The measurement and appraisal book of Arabic language for the pupils of the third and fourth primary school classes, (MOE, 1996);
c) The 'Study on the arousal of interest in reading in primary schools stage' prepared by curriculum specialists (MOE, 1991);
d) The national curriculum of Arabic and schoolbooks of fourth primary grade.dapted instruments that were parts of the Reading and Thinking Strategies Programme. These were a Questionnaire (Index) of Reading Awareness (Paris et. al., 1984), a Attitude scale to measure the readers' self-perception (Henk and Melnick 1995), and Metacognitive Interviews with the pupils (Norris, 1990).
2) Adapted instruments which were part of the reading and Thinking strategies programme. These were a Questionnaire (Index) of Reading Awareness (Paris et. al., 1984), an Attitude Scale to measure the readers' self-perception (Henk and Melnick, 1995), and Metacognitive Interviews with the pupils (Norris, 1990).
3) An instrument already used in Qatari schools. This was a Reading Achievement test, adopted with the courtesy of the Arab Gulf University (1989).

The different categories of these instruments are outlined in figure below:
Figure 6.1: Outline of Measurements used in the present study


In the next section, the researcher will describe the various measures used in this study. First, the assessments that were developed by the researcher for the needs of this study. Second, the assessments that were part of the adopted programme or
related to the present study. Finally, the assessment that was already used in the Qatari schools to assess the pupils' progress.

### 6.6.1 The Assessments Developed by the Researcher

These assessments were a reading comprehension test, cloze test, and think aloud passage.

### 6.6.1.1 The Reading Comprehension Test

This test was designed as a group administered test. This test aimed to measure the pupils' understanding of silent reading texts related to the adapted programme (Reading and Thinking Strategies). Its specific objectives were to assess the pupils' abilities in:

1) choosing the most appropriate title for the text,
2) recognition of word meaning,
3) simple recalling skill,
4) conclusion skill,
5) perception of cause-effect relations,
6) understanding the main idea and the general idea.

The researcher developed two equal versions of the test, rather than use the same version for pre and post assessment, to eliminate the testing threat by sensitisation to the post-test, posed by pupils who have already taken the pre-test. The two forms of the test had the same specifications. The reading comprehension test was composed of eight texts selected, extracted and simplified from several resources described in Table 6.2. The researcher herself wrote the questions for each text.

Table 6.2: Resources of the Reading Texts Used in the Test Forms A\&B.

|  | The Reading Texts | Resource |
| :--- | :--- | :--- |
| 1 | In form A: <br> Text numbers: 2,3,4 <br> In form B: <br> Text numbers: 2,4,5 <br> Text 1: An Arabic poem | 'the measurement and appraisal book of Arabic <br> language for the pupils of the third and fourth <br> primary school classes', (MOE, 1996) |
| 2 | In form A-text number: 1,5 <br> In form B-text number: 3,7 | 'Arabic Reading for grade four, 1991. |
| 3 | In form A-text number:6,7 <br> In form B-text number: 6 | 'Kaleelah and Dumnah', Ibn AlMuqafaqa' |
| 4 | In form A-B-text number 8 | 'Arabic Reading for Grade Four', 1996, Kuwait. |

The reading comprehension passages were followed by multiple choice questions. These questions addressed three types of reading comprehension: literal, inferential, and evaluative, as well as different levels of pupil comprehension: high, average and low. In addition, the lengths of the passage differed (between 100-400 words). The contents of the passage were also adapted keeping the ability level of pupils in mind. Though longer test passages have been used in the classroom (Valencia and Pearson, 1987; Wixson, Peters, Weber, and Roeber, 1987), there is little evidence at this time that longer passages provide a more valid measure of reading comprehension. According to Farr and Beck (1991), many pupils skim the reading selection and quickly move to the question when faced with longer passages.

The test specifications were as follows.

1) Each reading text included short Arabic poems by well-known poets and 2-3 paragraph reading passages telling short stories.
2) Each text was followed by comprehension questions based on the text.
3) The questions included one short-answer question and a set of multiple-option questions and vocabulary questions focusing on the recognition of word meanings.
4) The pupils were asked to tick the most appropriate answer.
5) This test was composed of two forms, which were similar in the type and level of questions. Form (A) was for the pre-test and form (B) for the post-test.
6) Forty-five minutes were given for completing this test.
7) One mark was given for every correct answer, and (no) mark for every wrong answer. Thus, full mark for this test was 15 marks, while the lowest was zero marks. (See Appendix 3).

### 6.6.1.2 The Cloze Test

According to theoretical constructs, the ability to fill out blanks with appropriate words requires a number of abilities related to competence of language. These abilities may include reading skills and strategies, knowledge of vocabulary, discourse, and grammatical structure. It is believed that successful performance in taking a cloze test taps into all of the abilities, which are the essence of general language proficiency (Brown, 1985).

Therefore, the cloze procedure was used in this study to measure the strategy the readers used to comprehend a reading text. The test consists of a passage with randomly chosen words blanked out. The pupils then fill in the missing words.

This procedure was used for this study, because it required readers during reading to understand the meaning of the entire passage and to construct appropriate responses, rather than to select multiple-choice alternatives. It is described below.

1) The reading texts were taken from the Arabic textbooks used in 1995 in Qatari primary schools.
2) This test was composed of two forms. Form (A) was the pre-test and Form (B) was the post-test
3) (B) for the post-test.
4) It was composed of two texts with 10 missing words in each.
5) The researcher decided the blank spaces. The pupils were asked to complete the text by supplying the missing words with the most suitable words based on the text,
6) The test was scored by allocating marks as follows:
a) two marks if the pupil put in the required word,
b) one mark if the pupil filled in the space with a suitable word that fitted the context,
c) zero marks, if it was incorrect. (See Appendix 4)

### 6.6.1.3 The Think-aloud Reading Technique

The 'Think-aloud' technique is used as an procedure to assess what is going through the pupil's mind as $s /$ he reads for meaning, as expressed in verbal reports by the pupils themselves. After the pupils finished the metacognitive interview (see p20) they were given the think-aloud passage. Before pupils read each passage, their background knowledge on the topic was probed by asking them to tell everything they knew about the particular topic and tell what comes to their mind when they read the passage's title. Two 'think-aloud' passages were used with the target pupils before and after the application of the programme. The passages chosen for the study were such that the pupils would possess some general knowledge of the topic selected, and would not find it too much of a challenge to understand the general context of the passage (See Appendix 5).

Each passage contained the same number of comprehension questions and the same amount of different types of questions, summarised as follows:

1) The first question was topical and focused on the main idea, 'tell me about the topic you have just read'.
2) The second question asked what one word from the passage meant.
3) Three questions were factual based on information stated in the passage and one question asked pupils to use their inferential ability.

These different types of questions were raised in order to get a general view of the pupils' comprehension of each passage. These passages also contained three internal consistency errors: one prior knowledge error, where a reader needed to have had prior knowledge or make inferences in order to detect meaning, and one item of unfamiliar vocabulary.

The coding system for the think-aloud categories was developed by sorting the strategy knowledge provided in the programme (reading-thinking strategy), into categories which reflected particular strategies. The following is a description of each strategy:

Evaluation: When a reader was evaluating pupil state of understanding or any feature of the passage which affected pupil understanding, she/he was said to be using an evaluative strategy. For example, when assessing their current comprehension of the passage, the pupils often made statements such as: " I don't get it. I don't know'. 'I knew that'.

Clarifying: When pupils were using background, reasoning through the passage, and expanding their understanding to make sense of what the passage was saying, it was deemed a clarifying statement. Clarifying statements went one step further than evaluative statements. Instead of just stating " I don't think that is
correct," pupils would explain why they were unsure, confused, agreed or disagreed with what the passage said.

Rereading: When pupils would immediately reread the passage after a first reading to aid or confirm their understanding, they were using rereading as a strategy to check or monitor their comprehension.

Self-Questioning: When pupils would ask themselves questions about the passage information to check for understanding, they were using self-questioning as a strategy. A self-questioning statement most often came in the form of a question, but it could also be a declarative statement.

Monitoring: When pupils were monitoring their comprehension through changing the rate of speed at which the passage was read, looking back to make sure the passage was making sense, and turning back to show where the passage did not make sense, they were said to be using monitoring as a metacognitive strategy.

Planning: When pupils took the time to organise their prior knowledge before they began reading in order to help them understand the text more clearly, they were said to be using planning as a metacognitive strategy. Planning strategies not only entail making schematic connections before reading the passage or sentence but also include setting goals for studying, asking questions before reading, and skimming the passage before reading it.

The data for the think-aloud passage were first transcribed verbatim before being categorised coded, and inspected for the types of metacognitive strategy utilised and the number of strategies practised. Pupils gave responses to the two passages once before the intervention and once after it. These responses were taperecorded and transcribed verbatim. Developing a category code system entailed sorting descriptive data into categories that reflected a particular strategy.

# 6.6.2 The Assessments of Metacognition Adopted by the Researcher for the purpose of the study: 

### 6.6.2.1 The Index of Reading Awareness

The 'Index of Reading Awareness' (IRA; Jacobs and Paris, 1987) was originally intended to measure the effectiveness of the authors' instructional programme (Reading and Thinking Strategies Programme) to determine pupils' awareness and knowledge of the reading strategies, including evaluation, planning, self-regulation, and conditional knowledge. For the purpose of the present study, this questionnaire was adopted to be used for fourth grade pupils to collect information about the effects the intervention programme in metacognitive strategies (Reading and Thinking Strategies Kit (Level 3/4). This questionnaire was adapted from 'The Reading Awareness Interview' (Paris \& Jacobs, 1984) which assessed four dimensions of metacognitive reading awareness according to pupils' abilities in planning; regulation; conditional knowledge and evaluation.

The questionnaire included 20 multiple choice questions with answers scored on a three-point scale: i.e. each question had three alternative responses representing an inappropriate response ( 0 mark), a partially adequate answer ( 1 mark), and a strategic response ( 2 marks). The order of the choices was randomised. The rationale for assigning such values to each alternative was as follows:

1) Responses in the zero categories were inappropriate or denied the problem.
2) Responses in the 1-mark category were adequate responses based on decoding, external features of the text, or vague references to affective or cognitive reaction, but with no mention of a specific strategy.
3) Choices receiving 2 marks were strategic responses that were evaluative or planful and exhibited awareness of reading goals and strategies (See Appendix 5).

### 6.6.2.2 The Reader Self-Perception Scale

This questionnaire was based on the questionnaires originally developed by Henk \& Melnick, (1995). The scale had been developed and formed for pupils in grades 4 to 6 and was designed to provide information about how pupils feel about themselves as readers in order to help teachers "devise ways to enhance their pupils self-esteem and to increase their motivation to read "(p480). Shoemaker (1998) also used the scale (RSPS) for pupils to assess their reading, as they perceive themselves while reading a text. It was also used by Abromitis (1999) to measure pupils' motivation towards general reading, so that this questionnaire provided information on pupils' concepts about themselves as readers.

For the purpose of the present study, this scale was adopted to be used for fourth grade pupils to collect information about the effects of the programme on the target pupils' attitude towards reading in general. It was used before and after the teaching of the experimental programme.

The scale consisted of 33 statements measuring the pupils' progress as readers, comparison with other pupils, social feedback from peers and family, and positive feelings when reading. Pupils were asked to read each item and rate their response to the statement using a five-point Likert scale (See Appendix 7).

### 6.6.2.3 The Metacognitive Interview

Woodward (1991) used this interview in connection with a Reading Strategy and Thinking programme. This interview was originally used in the studies of Garner
and Kraus (1982) and from Duffy, Roehler, Sivan, Rackliffe, Book, Meloth, Varus, Wesselman, Putman and Bassiri (1987), who used these questions to identify readers' metacognitive processes while reading a text, as reported by the readers themselves. The purpose of this interview was to determine what strategies the pupils reported they used and to ascertain how they felt these strategies helped them to understand the text. Since the current study had similar objectives, this interview was considered suitable to the purpose of this study.

The questions were asked before and after the programme.

1) What do good readers do when they read?
2) When you pick up something to read, what do you do?
3) What do you do when you come to a word you don't know?
4) When you come to a sentence you don't understand, what do you do?
5) Have you learned any reading strategies to help you remember what you read, from your teachers in school?

This interview was intended to be an assessment of the pupils' metacognitive knowledge of reading processes. The responses of each individual were coded and analysed in several different ways. First, thought units within each question were determined and then assigned a numerical value based on the level of metacognition that was expressed. The strategy values for questions 1 and 2 were from " 0 " to " 4 ". The thought units were awarded scores based on the following criteria:

1) " 0 " for thought units that reflected no strategy.
2) " 1 " for thought units that indicated processing at the word level.
3) " 2 " for thought units that indicated a passive text level strategy,
4) " 3 " for thought units that indicated an active text level strategy( no metacognitive statement)
5) "4" for thought units that indicated active text level strategies with metacognition.

For the next two questions, 3 and 4 , scores of " 0 " to " 3 " were awarded for thought units based on the following criteria:

1) " 0 " for thought units that indicated that the word would be skipped.
2) " 1 " for thought unit that indicated that the pupil had attempted to use a strategy (including context), but ended up skipping.
3) " 2 " for thought units that indicated the uses of strategy except context, where the pupil ended up knowing the word.
4) " 3 " for thought units that indicated that the pupil used context as one strategy and ended up knowing the word (See Appendix 6).

### 6.6.3 The Assessment that was used in the Qatari schools to assess the pupils' progress.

### 6.6.3.1 Reading Achievement Test

The Reading Achievement Test (Arab Gulf University 1989) was adapted to measure reading comprehension performance. The purpose of selecting the Reading Achievement Test was because it provided a standardised reading ability score of the pupils' performance before and after the intervention programme. This measure is used in Qatari schools to measure performance on the contents of the national curriculum in Arabic. This scale examines performance on five major language skills; reading, writing, listening, and speaking skills. For the purpose of this study, only the reading test was used. Equivalent forms of the test were used for both preand posttests. Each item of the test reflects the objectives and the content of the curriculum of the Arabic language for the elementary schools from grade one to grade six. The test consists of reading passages followed by short answer questions.

The test lasts approximately 45 minutes over a single session class period. The maximum mark that can be achieved for the reading part of the test is 30 and the minimum mark is 0 . The 30 marks are divided into two lots of 15 marks each, as follows:

1) 15 marks for the reading comprehension subtest, which consists of five passages, which is followed by three short answer questions;
2) 15 marks for the vocabulary completion questions. These require the pupil to complete fifteen sentences by choosing the appropriate word from the list provided.

The vocabulary subtest measures pupils' word knowledge and the comprehension subtest measures pupils ability to answer questions about text information they have read.

The following table summarises all the instruments and their uses in the
study.

Table 6.3 the measurement and their aim in the present study.

|  | Measurement | The aim of the measurement | Time required | Other requirement |
| :---: | :---: | :---: | :---: | :---: |
| 1 | $\begin{aligned} & \hline \text { Reading } \\ & \text { comprehension } \\ & \text { Test } \end{aligned}$ | -To measure of the pupils understand silent reading. | $\begin{aligned} & \hline 45 \\ & \text { minutes } \end{aligned}$ | Silent reading with some help if pupils need to sound out the word. |
| 2 | Cloze Procedure <br> Test  | -To measure the strategy uses by the pupils. | $\begin{array}{\|l\|} \hline 30 \\ \text { minutes } \end{array}$ | Silent reading and read the passage for the pupils one time |
| 3 | Index of Reading Awareness (IRA). | -To measure pupils' awareness of the strategies they use in reading. | 45 minutes | Teacher can read these <br> two instruments for the pupils. Pupils also |
| 4 | Self-Perception Questionnaire | -To measure pupils' attitudes about their reading. | $\begin{array}{\|l\|} \hline 30 \\ \text { minutes } \end{array}$ | should know that there no wrong answer in these instruments. |
| 5 | Reading Achievement | -To measure pupils ability in vocabulary and comprehension. | $\begin{aligned} & 45 \\ & \text { minutes } \end{aligned}$ | Silent reading with some help if pupils need to sound out the word. |
| 6 | Metacognitive <br> interview <br> think-aloud <br> technique. | -To measure what is going through pupil's mind as s/he reads for meaning | $\begin{array}{\|l\|} \hline 20-30 \\ \text { minutes } \end{array}$ | Pupils should take their time. Teacher tries to activate pupils' thinking. |

An important reason for using multiple measurements is to increase the construct validity of the programme and reduce one-method bias. In addition, reading comprehension, metacognitive awareness and self-perception are all inter-linked to each other, so it was expected that improvement in one area would lead to improvement in the others.

### 6.7 The Target Population of the Research

This study was conducted in Qatar. The target population was the elementary schools in Qatar. The population studied were fourth grade pupils of the elementary stage at public schools in Doha Directorate of Education (DDE) in the year 1999 2000. Elementary schools in Qatar are classified into three types: Boys' schools where all the pupils and teachers are males; Pioneer schools where the pupils are males, and teachers are females (because more women teachers than men are available in Qatar) and Girls' schools where all the pupils and teachers are females. The numbers of the pupils in these schools are 38818 (males, and females). The numbers of teachers are 3467 (males, and females). According to the Ministry of Education (MOE) (1998) there are 220 schools, 6,885 teachers, 2,396 school principals and management staff, and 72,869 pupils in all the school stages in Qatar. The average number of pupils in a class is 28 in Boys' schools, 30 in Pioneer Schools and 29 in Girls' schools. The ratio of pupils to teachers is 11 in Boys' schools, 11.9 in Pioneer Schools and 10 in Girls' schools. At the elementary stage in Qatar, there are 113 schools, 3,467 teachers, 1,308 principals and management staff and 38,818 pupils,

Schools contain pupils of various nationalities, as well as Arabs from the Qatar region, there are non-Arabs like Indians, Pakistanis and Iranians, and Arabs from outside the Gulf region.

In Chapter Three it was stated that the system of education in Qatar is centralised; all the schools apply one national curriculum and use one set of standard textbooks. Moreover, all these schools apply the same central rules and regulations under the supervision of the Local Directorates of Education.

### 6.8 The Pilot Study

The pilot study was conducted 1998-1999 to test the tools to be used in the main study by determining the level of their reliability and the degree of validity. These tools were applied on a single administration to a sample similar to the sample of the main study. The tools were piloted in three schools.

The pilot study was conducted in two phases. The first phase was to investigate the reliability and validity of the measurement instruments. The second phase was the validation of the intervention programme (Reading and Thinking Strategies), to test its suitability for use in the main intervention and adapt it accordingly.

### 6.8.1 Phase 1: Testing of the Assessment Instrument

### 6.8.1.1 Sample

The instruments of this study were piloted among fourth grade pupils in three elementary girls' schools in Doha. These three schools were selected randomly from a list of elementary schools supplied by the MOD. The number of fourth grade pupils in each school is shown in Table 6.4.

Table 6.4: Numbers of Fourth Grade Pupils of the three Pilot Schools in Doha in 1999/2000

| School | Khalifa | Hajer | Al-Najah | Total |
| :---: | :---: | :---: | :---: | :---: |
| The number of pupils in each <br> school | 1125 | 989 | 766 | 2880 |
| The number of fourth grade <br> pupils in each school | 134 | 125 | 69 | 328 |
| The number of teachers in <br> each school | 152 | 132 | 95 | 389 |
| The number of fourth grade <br> teachers in each school | 14 | 11 | 9 | 34 |
| The number of fourth grade <br> classes in each school | 4 | 4 | 2 | 10 |

The previous table shows the number of pupils, teachers, fourth grades pupils, and the number of fourth grades classes in each school. Also, it shows the sample number in this phase, which consisted of a total of 328 pupils.

### 6.8.1.2. Procedure

The study was subsumed under the MOD goal to raise academic achievement with a focus on reading. However, the researcher submitted a formal proposal to MOE and to these three schools to obtain formal permission to conduct the study. The researcher was introduced to the pupils as a new reading teacher who was gathering information on reading for MOD. The parents were informed of the piloting procedure in a letter of the schools from each school involved in this phase.

During the first week of April the researcher visited the Khalifa Primary School for Girls, the second week was spent in Hajer Primary School for Girls, and the last week was in Al-Najah primary School for Girls. Some instruments were applied in Khalifa Primary School for Girls, other instruments were applied in Hajer Primary School for Girls, and the last set of instruments were applied in Al-Najah primary School for Girls. The reason for this was to minimise disruption to the schools, and to avoid the boredom and loss of motivation that might have result of all pupils had taken every test. The following table (6.5) describes the way of piloting the instrument and the intervention programme

Table 6.5: The schools used for piloting the instrument and the intervention programme

| $\square$ | Test | Khalifa | Hajer |
| :---: | :---: | :---: | :---: |
| $\mathbf{1}$Reading <br> Comprehension <br> Test form A and <br> B |  | The two form A <br> \&B of the test were <br> piloted in this <br> school with number <br> of pupils 110 |  |
| $\mathbf{2}$ | Cloze Test <br> Form A and B | The two form of the <br> test were piloted in <br> this shool with <br> number of pupils 131 |  |
| $\mathbf{3}$ | Index of Reading <br> Awareness | The test was <br> piloted in this <br> school with number <br> of pupils 55 | The test was <br> piloted in this <br> school with number <br> of pupils 120 |
| Reading and <br> Thinking <br> strategies | The programme |  |  |

### 6.8.1.3 Validity and Reliability of the Assessment tools

The purpose of piloting the test(s) was to ensure that they meet two important criteria: Reliability and Validity.

In the educational context, "reliability" refers to the degree of accuracy with which the test measures, whatever it is that it measures (Bryman and Cramer, 1999). Reliability is important for both statistical and practical reasons in that, it has been shown that low reliability impairs inference by drastically increasing the error variance component of a measurement.

The Reliability of each instrument was estimated by the reliability coefficient, which was calculated by 'Cronbach's Alpha'. This is commonly used to
assess the internal consistency of the research instrument. (Gipps, 1994; Ghonaem \& Sabry, 2000).
"Validity" refers to how suitably a test goes about measuring what it is supposed to measure. According to Goldstein and Zedeck (1985), "Validity is the most important consideration in test evaluation". Researchers should be concerned with both external and internal validity. External validity refers to the extent to which the results of a study are generalizable or transferable. Internal validity refers to first, the rigor with which the study was conducted and, the extent to which the designers of a study have taken into account alternative explanations for any causal relationships they explore (Huitt, 1998). The following are the two types of validity used in this study:

Face validity is where a jury judges the statement clarity of the items, their appropriateness for the domains included in this tool and suggests the necessary amendments. This type is regarded as logical evidence of the tool validity and is believed to be the easiest and the most basic type of validity. Neuman (1994, p.131) supports this: "...A judgement by the scientific community that the indicator really measures the construct."

Construct validity is used to justify interpretation of test scores by explaining how the test score behaves as it does. For this purpose, one requires a clear conceptual framework from which hypotheses can be interpreted and tested; in addition it requires multiple lines of relevant evidence. Once the construct has been specified, it is important to compare it with rival hypotheses and alternative interpretations of test scores. Relevant evidence can be obtained in several forms, for example, relationship between items within a test, between test scores and other measures, performance differences over time, across different groups, settings,
experimental conditions, criteria and content relevance. Thus most forms of evidence for validity are covered under construct validity.

### 6.8.1.3.1 Outcomes for the Reliability and Validity

In this sub-section, the data analysis for the reliability and validity for the reading comprehension, cloze test, and index of reading awareness presented.

## (1) Reading Comprehension Test

## Reliability

A single administration of the test was applied to the selected sample of the pilot study. The reliability was calculated by Cronbach's Alpha. The Alpha for part 1 was 0.69 , for part 2 Alpha was 0.73 and for the two forms (A \& B) Alpha was 0.85 . The correlation of the two forms of the test was $(r=0.94)$ These values indicated a good level of reliability for both versions.

## Face Validity of the Reading Comprehension Test

The panel of experts was asked to judge the two-form test according to the items' accuracy, clarity and suitability for measuring reading comprehension and for the level of the target pupils. The judges consisted of two university professors of Arabic language and Education, three teachers and two specialists in testing and educational evaluation from the MOE. The feedback from the judges is summarised as follows:

1) Seventy percent agreed that the number of passages should be reduced from ten to eight,
2) Eighty two percent suggested simplifying the language of the text to the level of the pupils, considering the individual differences among them,
3) Eighty nine percent recommended restating certain expressions and phrases more clearly, simply and in a manner familiar to the pupils.
4) Seventy eight percent proposed that the length of the passages should be similar in number of words or lines.

The panel's suggestions were incorporated into the final version of the test to be piloted in the pilot study.

In the pilot study, validity was also calculated for the construct validity for the two versions (A\&B) of the test. Table 5.6 shows the values of these correlations for test form $A$.

Table 6.6: Item Validity for Reading Comprehension Test Form A.

| Item | Validity | Item | Validity | Item | Validity |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $0.514^{* *}$ | 6 | $0.364^{* *}$ | 11 | $0.438^{* *}$ |
| 2 | $0.292^{* *}$ | 7 | $0.635^{* *}$ | 12 | $0.330^{* *}$ |
| 3 | $0.418^{* *}$ | 8 | $0.590^{* *}$ | 13 | $0.542^{* *}$ |
| 4 | $0.486^{* *}$ | 9 | $0.550^{* *}$ | 14 | $0.503^{* *}$ |
| 5 | $0.329^{* *}$ | 10 | $0.413^{* *}$ | 15 | $0.428^{* *}$ |

**Correlation is significant at the 0.01 level (2-tailed). ( $\mathrm{N}=170$ )

The previous table shows that there were significant correlations among all the items. This would indicate that they are valid and the whole instrument is valid accordingly. It also shows that all items and the instruments as a whole were significantly and positively correlated. This confirmed that the test would measure reading comprehension.

Item validity for the reading comprehension test form B is shown in the following table.

Table 6.7: Item Validity for Reading Comprehension Test Form B.

| Item | Validity | Item | Validity | Item | Validity |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $0.323^{* *}$ | 6 | $0.454^{* *}$ | 11 | $0.408^{* *}$ |
| 2 | $0.374^{* *}$ | 7 | $0.415^{* *}$ | 12 | $0.490^{\star *}$ |
| 3 | $0.295^{* *}$ | 8 | $0.415^{* *}$ | 13 | $0.524^{* *}$ |
| 4 | $0.382^{* *}$ | 9 | $0.436^{* *}$ | 14 | $0.445^{* *}$ |
| 5 | $0.403^{* *}$ | 10 | $0.432^{* *}$ | 15 | $0.451^{* *}$ |

${ }^{* *}$ Correlation is significant at the 0.01 level (2-tailed). ( $\mathrm{N}=170$ )
This table reveals that all items and the whole test were positively correlated, which meant that the test was valid for measuring reading comprehension. This means that there is a very high level of validity in both forms of this test.
(2) Cloze Test

## Reliability

A single administration of the test was applied to the selected sample of the pilot study. The reliability was calculated by Cronbach's Alpha. The Alpha for part 1 was 0.65 , for part 2 Alpha it was 0.77 and for the two forms (A \& B) Alpha was 0.86. The correlation of the two forms of the test was $(r=0.96)$ These values indicated a good level of reliability of both versions.

## Face Validity of the Cloze Test

This test was also submitted to the same panel of experts as earlier, to judge its items and appropriateness for measuring the pupils' understanding. They agreed on choosing two texts out of the four texts; one for form A and the other for form B . Thus, the final version was finalised and ready for applying in the pilot study.

Furthermore, after this pilot study, the test validity was calculated by the construct validity. The resultant values confirmed the validity of the two forms of the test as shown in Tables 6.8 and 6.9. Table 6.8 shows the correlation for test form A .

Table 6.8: Item validity for cloze test form $A$.

| Item | Validity | Item | Validity |
| :--- | :--- | :--- | :--- |
| 1 | $0.408^{* *}$ | 6 | $0.524^{* *}$ |
| 2 | $0.549^{* *}$ | 7 | $0.571^{* *}$ |
| 3 | $0.570^{* *}$ | 8 | $0.445^{* *}$ |
| 4 | $0.505^{* *}$ | 9 | $0.393^{* *}$ |
| 5 | $0.348^{* *}$ | 10 | $0.508^{* *}$ |

**Correlation is significant at the $\mathbf{0 . 0 1}$ level (2-tailed). $\mathbf{N}=131$ )
This table shows that all validity values of the items and the whole test were positively correlated. This indicated that the test as a whole would measure what it was supposed to measure.

On the other hand, the item validity for Cloze test form B is represented in Table 6.9.

Table 6.9: Item validity for Cloze Test Form - b.

| Item | Validity | Item | Validity |
| :--- | :--- | :--- | :--- |
| 1 | $0.463^{* *}$ | 6 | $0.628^{* *}$ |
| 2 | $0.657^{* *}$ | 7 | $0.655^{* *}$ |
| 3 | $0.697^{* *}$ | 8 | $0.379^{* *}$ |
| 4 | $0.663^{* *}$ | 9 | $0.379^{* *}$ |
| 5 | $0.476^{* *}$ | 10 | $0.494^{* *}$ |

**Correlation is significant at the 0.01 level (2-tailed). ( $\mathrm{N}=131$ )

This table shows that all correlation values of the items and the whole test were positively and significantly correlated. This indicates that this form of the test would measure what it was supposed to measure.

## (3) Index of Reading Awareness Questionnaire

## Reliability

A single administration of the test was applied to the selected sample of the pilot study. Using the SPSS, reliability was calculated by Cronbach's Alpha. The values were ( 0.81 ) for all items. These values for the questionnaire as a whole indicated a good consistency level. Hence the questionnaire was reliable.

## Face Validity of the Reading Awareness Questionnaire

The researcher and five specialists in translation, all with an education background and experience, independently translated this questionnaire into Arabic. They then met to discuss the translated versions and revise the translated version. The co-translators suggested simplification of some items' statements to suit the pupils' cognitive level and background. Their suggestions were incorporated into the final Arabic version. Thus, it was approved and considered appropriate for the further validation by a panel of experts.

Subsequently, the Arabic version of the Reading Awareness questionnaire was submitted to the same panel as the other instruments. They were asked to evaluate this instrument in terms of the clarity of the statements, the appropriateness of each item to elicit the information, and whether each belonged item to the specified area of the four scales of Reading Awareness and to propose amendment to any item. The panel recommended the following:

1) Eighty three percent proposed keeping the stems of 12 items unchanged except for changing the introductory verb of each.
2) Seventy six percent recommended amending the statements of eight items in terms of appropriateness and belonging to the area.

Over the pilot study, the construct validity within the four scales and the instruments as a whole was calculated using the SPSS. The result of this analysis is shown in Table 6.10.

Table 6.10: Item Validity for Index of Reading Awareness Questionnaire

| Item | Validity <br> with <br> total | Validity <br> with <br> dimension | Item | Validity <br> with total | Validity with <br> dimension |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $0.551^{* *}$ | $0.641^{* *}$ | 11 | $.541^{* *}$ | $0.656^{* *}$ |
| 2 | $0.480^{* *}$ | $0.552^{* *}$ | 12 | $.594^{* *}$ | $0.687^{* *}$ |
| 3 | $0.642^{* *}$ | $0.678^{* *}$ | 13 | $.539^{* *}$ | $0.745^{* *}$ |
| 4 | $0.622^{* *}$ | $0.677^{* *}$ | 14 | $.648^{* *}$ | $0.734^{* *}$ |
| 5 | $0.594^{* *}$ | $0.641^{* *}$ | 15 | $.674^{* *}$ | $0.698^{* *}$ |
| 6 | $0.451^{* *}$ | $0.598^{* *}$ | 16 | $.547^{* *}$ | $0.656^{* *}$ |
| 7 | $0.561^{* *}$ | $0.642^{* *}$ | 17 | $.561^{* *}$ | $0.692^{* *}$ |
| 8 | $0.576^{* *}$ | $0.632^{* *}$ | 18 | $.666^{* *}$ | $0.689^{* *}$ |
| 9 | $0.594^{* *}$ | $0.674^{* *}$ | 19 | $.745^{* *}$ | $0.799^{* *}$ |
| 10 | $0.558^{* *}$ | $0.659^{* *}$ | 20 | $.680^{* *}$ | $0.756^{* *}$ |

**Correlation is significant at the $\mathbf{0 . 0 1}$ level (2-tailed). $\mathbf{N}=\mathbf{1 7 5}$ )

The table shows that all item correlation values were statistically significant.

### 6.8.1.3.2 The Concurrent Validity for key measurers

For the purpose of establishing concurrent validity, the correlation coefficient was determined between the research measures in the post-test for both groups. This was done as an additional test of validity to those done previously, i.e. face and construct validity. The correlation coefficient was also used in this study to support the validity of the method, since it was the first of its kind to be implemented for Arabic language. The correlation coefficient can summarise the strength of association between a pair of measures and provides an easy means of comparing the strength of relationship between one pair of measures and another. A good correlation coefficient meant that the results of the tests could be related to each other.

Table 6.11: Concurrent Validity

|  | RC | CL | AW |
| :---: | :--- | :--- | :--- |
| Reading <br> Comprehension | 1.000 | $0.623^{* *}$ | $0.709^{* *}$ |
| Cloze Procedure | - | 1.000 | $0.815^{* *}$ |
| Index of Reading <br> Awareness | - | - | 1.000 |

** $r$ is significant at ( 0.01 )
This table shows the following:

1) Reading Comprehension: There were positively significant correlations ( $\mathrm{p}=0.01$ ) between Reading Comprehension, Cloze test and Index of Reading Awareness.
2) The Cloze Procedure: There were positively significant correlations between the Cloze Procedure and the two other measurements.

### 6.8.2 Phase 2: Pre-testing the Experimental Programme

The second phase of the pilot study was conducted during the period from September to December 1999-2000. The aim of this pilot study was to avoid possible problems that could arise in the implementation of the reading strategies programme in the main study and to determine the validity of the reading strategies programme.

### 6.8.2.1 Sample

The pilot study involved 47 fourth-grade pupils of two classes in one school, Al-Najah Primary School, taught by one teacher. This school was chosen because it was considered to be adequately representative of the sample needed for the study.

In addition, the school authorities were co-operative in allocating time for pupils to be involved in the pilot study. For both these reasons, the school was chosen for the pilot study. One teacher volunteered to deliver the programme.

### 6.8.2.2 Procedure

The programme was carried out over a period of 8 weeks according to the schools regular timetable of classes; i.e. three 45 -minute periods per week.

1) One-fourth grade teacher volunteered to deliver the programme. The teacher had a copy of the programme and the assessment measures.
2) Several meetings were held with the teacher to discuss every aspect of the programme and explain the aim of piloting the programme.
3) The researcher asked the teacher who delivered the programme to note any difficulty or any issue that might arise during the application of either the instruments or the programme.

For the purpose of the pilot study the fourth grade teacher administered the pilot programme in the actual process of regular teaching.

### 6.8.2.3 Outcomes

As a result of the pre-testing, the following changes were made to the programme:

1) Lesson number seven was found to be too difficult for target pupils of the study. This may have been as a result of the differences between the Arabic curriculum and the English curriculum. The lesson was therefore simplified, so that these pupils would more easily understand it.
2) The workbook did not provide additional notes for the pupils in the pilot study. These were provided later on, for the pupils in the main study.
3) A weekly work-plan was needed for the teacher, so that the sequence and unity of modules could be maintained, even when holidays intervened.
4) Poor readers needed the teacher's direct instruction and support. This entailed the teacher administering more instruction (i.e., more teacher control was needed), to explain to the pupils what they were required to do, because a wide range of comprehension skills was being taught.
5) Pupils who participated in the pilot phase had to take the modules for reading comprehension as extra modules, which did not contribute to the grades, so they lacked attitude. Therefore, measures to measures attitude were introduced into the main study. In the main study, the programme itself was made more interesting and motivating, and the programme was included as part of the normal syllabus with grades. The pupils were also encouraged by the fact that this was one of the first studies in its kind in Qatar. The pupils were also awarded a certificate if they completed the programme satisfactorily. All these measures contributed to motivating the pupils in the main study. The data obtained from this phase will be presented in chapter seven.

### 6.9 The Main Study

In this section the researcher describes the main study, including the following: the sampling procedures, the implementation of a reading strategy programme in actual classrooms, the metacognitive interview procedure, and the method used to analyse the data.

### 6.9.1 Population and Sample of the Main Study

Khalifa Primary School was randomly selected from the three primary schools that had been involved in the pilot study phase. This school represented the different demographic and cultural features of the Doha population, as it included Qatari pupils and pupils from neighbouring Arab and non-Arab countries. The study was initially valid data was only collected and analysed for 64 of these 76 pupils.

### 6.9.1 Population and Sample of the Main Study

Khalifa Primary School was randomly selected from the three primary schools that had been involved in the pilot study phase. This school represented the different demographic and cultural features of the Doha population, as it included Qatari pupils and pupils from neighbouring Arab and non-Arab countries. The study was initially carried out with 76 pupils, however valid data was only collected and analysed for 64 of these 76 pupils. This was due to the fact that 10 of these pupils had moved before the end of the study and new pupils came in through the year. They were not included in the data analysis. In addition, although 66 pupils completed the pre-testing, the scores for two of these participants were dropped from the analysis because one of the pupil's scores on the pre-test fell below the level of chance for the test of reading comprehension, and the other pupil's scores fell below the level of chance for the Cloze test.

Before starting the experimental work, it was necessary to ensure that the two groups were normally distributed by using Kolmogorov-Smirnov's test of normality, which revealed that this assumption was met. In March 2000, two classes were randomly chosen from the $4^{\text {th }}$ grade pupils from the same school to ensure the equivalence of the educational status between them. The first class consisted of 31 pupils and the other class was 33 pupils. To check that the two classes were similar before application of the programme, pre-tests were conducted on both classes. The results were similar for both classes (see chapter 7; table 7.3 p.140). Therefore, one class, consisting of 31 pupils was chosen as the control group and the other, of 33 pupils, as the experimental group. The differences between the two groups were estimated using the differences in the means by T-test procedure. The next chapter will explain these results in more detail.

This was due to the fact that 10 of these pupils had moved before the end of the study and new pupils come in part through the year. They were not included in the final data analysis. In addition, although 66 pupils completed the pre-testing, the scores for two of these participants were dropped from the analysis because one of the pupils' scores on the pre-test fell below the level of the chance for the test on the reading comprehension and the other pupil's scores fell on the cloze test.

Before starting the experimental work it was necessary to ensure that the two groups were normally distributed by using Kolmogorov-Smirnov's test of normality, which revealed that this assumption was met. In March 2000, two classes were randomly chosen from the $4^{\text {th }}$ grade pupils from the same school to ensure the equivalence of the educational status between them. The first class consisted of 31 pupils and the other class was 33 pupils. To check that the two classes were similar before application of the programme, pre-tests were conducted on both classes. The results were similar for both classes (see chapter 7; table 7.3 p.140). Therefore, one class, consisting of 31 pupils was chosen as the control group and the other, of 33 pupils, as the experimental group. The differences between the two groups were estimated using the differences in the means by T-test procedure. The next chapter will explain these results in more detail.

Both the experimental and controls groups were in the same school, having almost the same number of pupils in each class and the same teacher taught both the experimental and control groups. This was done to ensure equivalence of the two groups in terms of quality of teaching. The only thing that would be different is the special characteristic of the metacognition programme.

### 6.9.2 Administration of the Reading Assessment Instruments and Application of the Reading Strategies Programme

In this subsection the teacher training; procedures for pupils followed by the procedures for the intervention provided to the experimental groups and the instruction provided to the control groups are described. Finally, the study assessment procedures are described.

## 6-9.2.1 The Teacher Training

Two meetings were held with the teacher involved in this study to:

1) Inform the teacher about administration of the research assessment instruments that would take place before and after the intervention period;
2) Familiarise her with and discuss every aspect of the programme,
3) Explain the mission and discuss any likely difficulty or issue that might arise during the application of either the instruments or the programme. Five teacher training sessions were held as follows:
$\left.\begin{array}{ll}\text { First meeting } & \text { Directions for the study and introduction and } \\ \text { overview of the study }\end{array}\right]$ Second meeting $\quad$ Description of materials for the assessment.

Third and fourth Description of materials for the intervention meeting programme.

The fifth meeting A review session to address any questions about the assessment and the programme.

### 6.9.2.2 The procedures for pupils and the intervention

For the purposes of this study there were two separate groups; one of them the experimental group which received the intervention programme (metacognitive strategy training) and the other the control group which received the regular programme (traditional method) which had been taught before. These two programmes were carried out over a three-month period, March-June 2001. Each group had six 45 -minutes classes per week. The control group received only the regular programme, whereas the experimental group had three 3 sessions per week of the experimental programme and followed the regular programme for the other three sessions. The experimental programme consisted of explicit, direct instruction, which aimed to help pupils to become more effective readers by showing how and when to employ metacognitive strategies to improve their reading comprehension. The fourth grade teacher administered this intervention programme in the actual atmosphere of regular teaching in the same school and the same classroom, so that the situation looked real not artificial. Efforts were also made to increase internal validity by controlling for the teacher effect by having one teacher implement both methods of instruction and controlling for outside reading instruction. According to Everett (1987) Collins (1980) Dwyer and Reed (1989) and Schiavone (2000), because of differences in teachers' educational and experience backgrounds, their methods of instruction are unlikely to be the same, making it impossible for researchers to control for teachers' personal values and beliefs. An attempt was made in the present study to control the teacher variable by using the same teacher to implement both methods of instruction and making sure that the participating pupils were taught by the same group of teachers in their other subjects.

### 6.9.2.3 Metacognitive Interview procedure in the main study

A brief investigation was undertaken of metacognitive strategies utilised by a total of 12 pupils, 6 from the experimental group and 6 from the control group.

These pupils were divided into three groups: high, average, and low in reading comprehension, according to their performance in reading achievement before the intervention. A structured interview and think-aloud passages were administered to each individual subject before and after the intervention in a quiet room in the school, to determine the reported metacognitive knowledge of reading strategies used by pupils before and after the experimental programme. A scripted interview was taped during pre-testing and post-testing. The interview and think aloud passage lasted approximately 20-30 minutes. In analysing the interview data, responses to questions were first transcribed and then divided into thought units that represented a reading process or strategy. A numerical value was then assigned based on level the of metacognition expressed. Next, the mean number of thought units in each numerical value was calculated and then converted to a percentage. Finally, pre and post-test differences were analysed.

### 6.9.2.4 The study assessments are described

The assessment procedure used in this study measured reading comprehension, reading awareness, and self-perception. The measures assessed comprehension as measured by the reading comprehension test, cloze test, and reading achievement forms A for the pretest and for B for posttest. The measures assessed reading awareness as measured by the index of reading awareness questionnaire, metacognitive interview, and think-aloud. Reading attitude was measured by self-perception questionnaire. The pre-test and post test were administered by the teacher. The procedure was timed and the teacher collected the
response sheets. The teacher followed the assessment directions, which explained that pupils should read the assessment and answer the questions. Each pupil's sheet was assigned an identification number that indicated pre or posttest and experimental and control groups. The researcher scored the responses.

### 6.10 Data Analysis

Descriptive statistics were computed for the assessment data for each groups, and the mean scores of the pretest and posttest responses were calculated. The data were analysed by various methods, according to the nature of the data collected.

Parametric and non-parametric analyses were used in this study as follows:

1) Parametric describes a mathematical function, which is always used with normal distribution. In this study, parametric analysis is used for many reasons. First, this study seeks to examine the effectiveness of 'Reading and Thinking Strategies' programme on reading comprehension strategies using a quasiexperimental non-equivalent group, pre-test, post-test and experimental-control groups design. The "t-Test" is a parametric test of data analysis, which is used to show difference among groups. Because the two groups in this study were independent, the $t$-Test was used to show difference between them. The paired $t$ test applied in this study was used to measure variables in a single group of individuals at different times.
2) Non-parametric tests or analysis are often used in place of their parametric counterparts when certain assumptions about the underlying population are questionable. This type of analysis was used with the data that related to the experimental groups and the metacognitive interview and think-aloud technique. This test was applied here because the sizes of the groups were under 30. Two typs of non-parametric tests were used in this study. First, The Kruskal-Wallis

Test this test is an alternative to the independent groups ANOVA, when the assumption of normality is not met. This test used to compare three or more independent groups of sampled data. This test uses the ranks of the data rather than their raw values to calculate the statistic. Second, The Wilcoxon MannWhitney test is one of the most powerful of the non-parametric tests for comparing two populations, which has been used in this study.

Table 6.12: Shows the data analysis that the researcher uses in next
Chapter.

| Parametric | Non-parametric |  |
| :--- | :--- | :--- |
| $\mathbf{1}$ | To analysis the dependant <br> measurement of the study. <br> Reading Comprehension, Cloze <br> test, Index of Reading <br> Awareness, the self-perception <br> scales. Reading Achievement | To analysis the dependant <br> measurement of the study. <br> Metacognitive interview and <br> think aloud passage. |
| $\mathbf{2}$ | T-test difference between the <br> groups for all the measurement. | The Kruskal-Wallis Test. <br> compare three or more <br> independent groups |
| $\mathbf{3}$ | The paired T-test to measure <br> single group of individuals <br> difference between pre-post test | The Wilcoxon Mann- <br> Whitney |
| comparing two populations |  |  |

The results of these tests will be explained in detail in the next chapter.

### 6.11 Summary:

This chapter has described and explained the methods used to answer the research question regarding the impact on $4^{\text {th }}$ grade elementary school pupils of explicit training in the use of reading strategies as an aid of comprehension.

A quasi-experimental design was chosen in which two groups of pupils were compared on various measures of comprehension performance, strategy use and reading self-awareness, before and after a three-month teaching programme: the standard Qatar reading programme for the control group, and the reading strategy
programme for the experimental group. The programme has been described and its translation and adaptation for the Qatari context explained.

Reading comprehension was measured by a comprehension test and Cloze test developed by the researcher. Strategy use and awareness were assessed by think-aloud tasks, the IRA (Paris et al, 1984), a self-perception scale (Herk and Melrick, 1998) and metacognitive interviews. All these measures were tested for reliability and validity, with classes of $4^{\text {th }}$-grade pupils from three randomly selected schools in Doha.

Because of the time-consuming nature of the programme, and in order to control for teacher effect, the reading strategy programme was applied in a single school selected from among the three that had been involved in piloting the instruments. Valid, usable data were collected from 64 pupils: 31 in the control and 33 in the experimental group.

The outcomes of the study are reported in the next chapter.

## CHAPTER SEVEN

## DATA ANALYSIS AND PRESENTATION OF RESULTS

### 7.1 Introduction

This chapter reports the results obtained from data analysis procedures from both the pilot study and the main empirical study, intended to determine whether the Reading and Thinking Strategy had been effective. One of the main research questions investigated was "Does the reading and Thinking Strategies intervention programme adopted in this study affect pupils' performance on reading comprehension tasks?"

The data for this study were collected from two classes of fourth grade pupils. The metacognition intervention (The Reading Thinking Strategy) was addressed to the experimental group pupils. Meanwhile, the control group continued with their regular reading comprehension instruction. All pupils included in the study were measured in (1) a test of reading achievement: (2) a reading comprehension test: (3) a cloze test: (4) a reading awareness questionnaire: (5) a self-perception questionnaire: (6) and a metacognitive interview and think-aloud passage before and after receiving reading instruction. The following sections present the results from regarding the pilot study and main study.

### 7.2 The Data Analysis for the pilot Study

The aim of piloting the programme (Reading and Thinking Strategy) was to avoid any possible problems that could arise in the implementation of the programme in the main study and to determine the validity of the programme. The pilot study involved 47 pupils from two classes of fourth-grade pupils in one school, which was Al-Najah Primary School. One teacher taught these two classes. To achieve the
purpose of the pilot study, the researcher used a test of reading comprehension as well as the Index of Reading Awareness (IRA) developed by Paris (1989), a newly developed Reading Comprehension Test, and a newly developed Cloze Test to test the effectiveness of the programme. The researcher used four main components of the IRA - evaluation, planning, regulation and conditional knowledge to measure the pupils' ability in each of these four individual components. These four components were selected because they form an integral part of the intervention, and any problems on these in that arose during the pilot study could be resolved before using the programme for the main study. As the concern was to explore difficulties complementing the programme, the data gathered concerned pre-post measures for the pilot experimental group. Differences between the pre-post scores of the pupils' grades were calculated for each dependent measure of the phase, using the paired sample T-test. The following table indicates these results:

Table 7.1: Means, SD Pre-test, Post-test of the measurement in the pilot study

| Measurement | group | N | Means | SD | $\begin{gathered} \text { sig. } \\ \text { (2-tail) } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Reading Comprehension Test | pretest | 47 | 8.808 | 2.731 | .003* |
|  | posttest | 47 | 10.148 | 2.519 |  |
| Cloze Test | pretest | 47 | 8.127 | 2.609 | . 132 |
|  | posttest | 47 | 8.319 | 2.571 |  |
| Evaluation | pretest | 47 | 4.191 | 2.626 | .008* |
|  | posttest | 47 | 5.361 | 2.390 |  |
| Planning | pretest | 47 | 5.106 | 1.371 | . 654 |
|  | posttest | 47 | 5.595 | 1.209 |  |
| Regulation | pretest | 47 | 4.978 | 1.343 | .031** |
|  | posttest | 47 | 5.787 | 1.159 |  |
| Conditional Knowledge | pretest | 47 | 4.383 | 2.172 | .042** |
|  | posttest | 47 | 5.510 | 1.863 |  |
| Total of Reading Awareness | pretest | 47 | 18.659 | 5.749 | .051******** |
|  | posttest | 47 | 22.255 | 4.697 |  |

Table (7.1) indicates the following:

1) There is a statistical difference between the pretest and posttest scores on the reading comprehension test in favour of the posttest.
2) No statistical difference was found between the pretest and posttest scores on the cloze test.
3) There is statistical a difference between the pretest and posttest overall scores on the Index of Reading Awareness (IRA) scale in favour of the posttest.
4) There are statistical differences between the pretest and posttest scores for individual components on Index of Reading Awareness in evaluation, regulation, and conditional knowledge, but not the planning component, in favour of the posttest.

From these outcomes it is clear that the programme had a positive effect on three out of the four strategies that the programme offers. This outcome encouraged the researcher to emphasise the planning strategy when it was taught in the main study.

To know the extent of the continuous effect of the programme upon reading comprehension, cloze performance, and evaluation, planning, regulation, conditional knowledge and reading awareness strategies, the tests were applied to the same sample three weeks after the post-test, in order to follow up. The differences between the post-test and the follow up was calculated for each dependent measure by using the paired sample T-test. The following table 7.2 shows these results.

Table 7.2: Means and SD for, Post-test and follow up

| Measurement | group | N | Means | SD | $\begin{gathered} \text { sig. } \\ (2 \text {-tail) } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Reading <br> Comprehension <br> Test | posttest | 47 | 10.148 | 2.519 | 0.69 |
|  | Follow - up | 47 | 10.510 | 2.569 |  |
| Cloze Test | postest | 47 | 8.127 | 2.609 | 0.38 |
|  | Follow - up | 47 | 8.106 | 2.837 |  |
| Evaluation | posttest | 47 | 4.191 | 2.626 | . 55 |
|  | Follow - up | 47 | 3.914 | 2.375 |  |
| Planning | postest | 47 | 5.106 | 1.371 | . 080 |
|  | Follow - up | 47 | 5.085 | 1.194 |  |
| Regulation | posttest | 47 | 4.978 | 1.343 | . 75 |
|  | Follow - up | 47 | 4.787 | 1.121 |  |
| Conditional Knowledge | posttest | 47 | 4.383 | 2.172 | . 25 |
|  | Follow - up | 47 | 4.276 | 1.963 |  |
| Total Index of Reading Awareness | posttest | 47 | 18.659 | 5.749 | . 24 |
|  | Follow - up | 47 | 18.383 | 5.451 |  |

From table (7.2) it is clear that there are no significant differences between posttest score and follow up score for any of the studied measurements, which means that the programme effect upon the strategies was sustained.

### 7.3 The Data Analysis for the Main Study

As mentioned in Chapter six (6.8.1. Population and sample of the main study), it was necessary to be sure that the two groups were normally distributed. Two classes were randomly chosen from the $4^{\text {th }}$ grade pupils from the same school to ensure the equivalence of educational status between them. The first class consisted of 31 pupils and the other class was of 33 pupils. One of the classes was considered as the control group and the other as the experimental group. Estimations of the differences in the means of the pupils' grades were calculated for the two groups for each dependent measure of the study, using the Independent sample T-test procedure. The following table indicates these results:

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The T-test (Paired sample T-test) was calculated to investigate whether there were statistically significant differences between the pre-test and post-test scores for the control group on the study measurements. Table 7.5 indicates these results:

Table 7.5: the mean differences between pretest and post- test scores for control group on all study measurement.

| Measurement | Test | Mean | SD | Gain <br> for SD | Gain | $\begin{gathered} \text { sig. } \\ \text { (2-tail) } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reading Comprehension | Pre | 5.41 | 1.025 | . 041 | . 716 | 1.754 |
|  | Post | 5.64 | . 984 |  |  |  |
| Cloze Test | Pre | 7.38 | 2.275 | . 264 | . 454 | 1.976 |
|  | Post | 7.22 | 2.539 |  |  |  |
| Index of reading Awareness | Pre | 17.09 | 2.270 | . 290 | 1.84 | . 875 |
|  | Post | 16.80 | 2.676 |  |  |  |
| Reading Achievement | Pre | 13.03 | 1.168 | . 290 | 2.36 | . 682 |
|  | Post | 12.74 | 2.205 |  |  |  |
| Self <br> Perception | Pre | 58.93 | 5.784 | . 225 | 1.43 | . 879 |
|  | Post | 59.16 | 6.330 |  |  |  |

The results in the table (7.5) indicate that:
There were differences between pre-test and post-test scores for the all the research measures: increases for reading comprehension and self-perception, and decreases for the other measures. However, these differences did not reach the level of statistical significance. Thus, there were no significant gains in Reading Comprehension, Cloze, Reading Awareness, Reading Achievement, and selfPerception. This means that the ordinary teaching method had little if any effect (positive or negative) on the dependent measures.
7.3.3 Comparison between the experimental and control groups in their gain score

The T-test (dependent sample T-test) was conducted to investigate whether there were statistically significant differences in the gain scores (differences between the pre-test and post-tests) for the experimental and control groups on the study
measurements. Using the "T" test for the difference between these mean gain scores of the experimental and control groups, it was shown that they differ significantly from each other. Table (7.6) indicates these results:

Table 7.6: The Differences between the experimental group and control group gain scores.

| Measurement | Group | N | Mean | SD. | $\begin{gathered} \text { sig. } \\ (2 \text {-tail } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Reading comprehension | Control | 31 | . 225 | . 984 | .000* |
|  | Experimental | 33 | 2.969 | 1.25 |  |
| Cloze Test | Control | 31 | . 1613 | 2.53 | .000* |
|  | Experimental | 33 | 6.75 | 2.81 |  |
| Index of Reading Awareness | Control | 31 | . 290 | 2.67 | .000* |
|  | Experimental | 33 | 11.33 | 5.92 |  |
| Reading Achievement | Control | 31 | . 290 | 2.20 | .000* |
|  | Experimental | 33 | 9.848 | 2.53 |  |
| Self perception | Control | 31 | . 225 | 6.330 | 0* |
|  | Experimental | 33 | 57.69 | 5.141 |  |

* Significant at the 0.01

The results in table (7.6) indicate that there were significant differences between the control group and the experimental group on gain scores in favour of the experimental group. The table also shows that the experimental programme is significantly more effective than the traditional programme in increasing the pupils' Reading Comprehension, Cloze performance, Reading Awareness and Reading Achievement and it improved the pupils' Reading self-Perception.

### 7.3.4 Comparison between the experimental and control groups in their post test and effect size scores

To find whether there were significant differences between the control group and the experimental group on their post-test, scores comparison between the mean score of each group was made using the T test for dependent samples.

As a further test of educational significance, the effect size (ES) was used to test whether the programme was effective in terms of educational practice. According to Glass (1984) the effect size helps the educational researcher to assess the practical significance of the relationships, and interpret and describe group difference upon the application of an experimental treatment. Stevens (1996) reports that the effect size is considered small at a value around .20 , medium at a value around .50 and large at a value of $<.80$. Table (7.7) indicates these results:

Table 7.7: The Differences between the experimental group and control group in their posttest and the effect size score

| Measurement | Group | N | Means | SD. | $\begin{gathered} \text { sig. } \\ \text { (2-tail) } \end{gathered}$ | $\begin{gathered} \text { Effect } \\ \text { size } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ReadingComprehension | control | 31 | 5.645 | . 9848 | .000* | . 78 |
|  | experimental | 33 | 8.272 | 1.256 |  |  |
| Cloze | control | 31 | 7.225 | 2.539 | .000* | . 79 |
|  | experimental | 33 | 14.151 | 2.818 |  |  |
| Awareness | control | 31 | 16.806 | 2.676 | .000* | . 79 |
|  | experimental | 33 | 28.787 | 5.920 |  |  |
| $\begin{aligned} & \text { Reading } \\ & \text { Achievement } \end{aligned}$ | control | 31 | 12.741 | 2.205 | .000* | . 90 |
|  | experimental | 33 | 23.121 | 2.534 |  |  |
| Self | control | 31 | 59.161 | 6.330 | .000* | . 98 |
|  | experimental | 33 | 117.242 | 5.141 |  |  |

The results in Table (7.7) indicate:

1) That there were significant differences between the experimental and control group in their post-test scores with higher scores in each case in favour of the experimental group.
2) That there were high effects sizes values in favour of the experimental group. The table shows that the experimental programme is significantly more effective than the traditional programme in increasing the pupils' Reading Comprehension, Cloze performance, Reading Awareness and Reading Achievement and it
improves the pupils' Reading Self-Perception. The effect size values obtained indicate that this significant difference in favour of the experimental group can be considered to be educationally significant.

### 7.4 More Data Analysis related to the effectiveness of the experimental group:

4) Further analysis was done on the data to explore the effectiveness of the programme for the experimental group. This was done to further address the research question, " Does the Reading and Thinking Strategies programme adapted in this study affect pupils' performance on reading comprehension?

Because of the focus of the study and because it would not be appropriate to expect the traditional reading approach to differentially affect reading strategies, only data for the experimental group was obtained and analysed in this depth.

First, in order to have an in-depth understanding about how the intervention programme (Reading and Thinking Strategy) affected pupils with different levels of reading ability, the researcher divided the experimental group into three groups based on their reading achievement test before intervention. The groups were designated into three groups (high, average and low). A comparison of the three levels of reading ability was carried out, using the pre-post test differences. The Kruskal Wallis Test was used to calculated whether there were statistically significant differences between the three groups' (high, average and low) in their gain scores on the study measurements. The (Kruskal Wallis Test) is a non-parametric test (distribution-free) used to compare three or more independent groups of sampled data.

Table (7.8) indicates the result.

Table 7.8:The (Kruskal Wallis Test) to compare between the three level of reading ability for the experimental groups in their gain score.

| Measurement | Groups | N | Mean Rank | Asymp sig. |
| :---: | :---: | :---: | :---: | :---: |
| Reading Comprehension Test | High | 9 | 22.83 | .051** |
|  | Average | 17 | 15.15 |  |
|  | Low | 7 | 14.00 |  |
|  | Total | 33 |  |  |
| Cloze Test | High | 9 | 17.61 | .048** |
|  | Average | 17 | 19.76 |  |
|  | Low | 7 | 9.50 |  |
|  | Total | 33 |  |  |
| Index of Reading Awareness | High | 9 | 28.33 | .000* |
|  | Average | 17 | 16.18 |  |
|  | Low | 7 | 4.43 |  |
|  | Total | 33 |  |  |
| Self-perception | High | 9 | 19.61 | .000* |
|  | Average | 17 | 18.24 |  |
|  | Low | 7 | 10.64 |  |
|  | Total | 33 |  |  |

* $t$ is significant at . 05
** $\mathbf{t}$ is significant at . 01

The table (7.8) indicate:

1) There were statistical significant differences between the three levels of reading ability in their gains score in Reading Comprehension, Cloze, Awareness, and self-Perception in favour to the high level of reading comprehension.

Second, data is reported giving the results of the Index of Reading Awareness measure in order to show the relative effects in separate strategies (as was explored in the pilot test). The T-test (Paired Sample T-test) was calculated to investigate whether there were statistically significant differences between the pretest and posttest for the experimental group related to the index of reading awareness. This was done in order to understand the impact of the programme on individual strategies. It also allows comparison with the pilot study results.

Table (7.9) indicates these results:
Table 7.9: the differences between pre-test and post- test in index of reading awareness for experimental group.

|  | Test time | Means | N | SD. | sig. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Evaluation | Pre | 3.8788 | 33 | . 5999 | .000* |
|  | Post | 8.2121 | 33 | 1.8330 |  |
| Planning | Pre | 4.9091 | 33 | . 7650 | .001* |
|  | Post | 7.6061 | 33 | 2.0146 |  |
| Regulation | Pre | 4.7879 | 33 | . 6963 | .000* |
|  | Post | 6.5152 | 33 | 1.7522 |  |
| Conditional Knowledge | Pre | 3.8788 | 33 | . 6963 | .000* |
|  | Post | 6.4545 | 33 | 1.7694 |  |
| Awareness | Pre | 17.4545 | 33 | 1.5226 | 000* |
|  | Post | 28.7879 | 33 | 5.9201 |  |

* Significant at 0.01

The results in Table (7.9) show that there were significant differences between pretest and posttest for all of the individual components related to the intervention programme that had been used with the experimental group. So, there was significant gain in Evaluation, Planning, Regulation, Conditional Knowledge, and Index of Reading Awareness, as a result of the intervention programme. This means that the programme has a positive effect on the research independent variables. (Most closely related to the aim of the programme).

### 7.5 Analysis of the Data related to the Metacognitive Interviews and Think aloud Measure

### 7.5.1 Metacognitive Interviews.

A brief investigation was undertaken of the metacognitive strategies utilised by 12 pupils selected from both groups ( 6 from the experimental and 6 from the control group). The pupils were chosen based on the results of the pre-test in reading achievement test, aiming to keep a balance of pupils with different reading ability.

The following Table (7.10) shows the scores for the pupils in the two groups in their reading achievement test.

Table 7.10: Shows the three groups of pupils.

|  | Experimental | Control | Levels |
| :--- | :--- | :--- | :--- |
| 1 | 25 | 24 | High |
| 2 | 23 | 23 | High |
| 3 | 18 | 20 | Average |
| 4 | 21 | 21 | Average |
| 5 | 15 | 16 | Low |
| 6 | 14 | 13 | low |

A structured metacognitive interview and think-aloud passages were administered to each individual pupil before and after the intervention, to determine the reported metacognitive strategies known and used by pupils before and after the experimental programme.

The following is based on the analysis of the pupils' responses to each question. Quantitative data are presented in the form of a table while the qualitative data are presented in terms of an explanation.

## Question 1: What do good readers do when they read?

This question asks pupils to report their level of awareness of reading processes as an indicator of their metacognitive knowledge of these processes. To establish pre-and post- responses in terms of the value of each strategy identified by the pupils, in the two groups, the totals of each numerical value were calculated. This has been calculated by using the mean rank values of Mann-Whitney test, and shown for each strategy of pre and post-interview. Table (7.11) shows the results.

Table 7.11: The mean rank value of Mann-Whitney in pre-and posttest for pupils in both groups in first question.

|  | group | $\mathbf{N}$ | Mean <br> Rank | Sum of <br> Ranks | Asymp <br> Sig |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pre- <br> interview | experimental | 6 | 6.00 | 36.00 | .621 |
|  | control | 6 | 7.00 | 42.00 |  |


|  | Total | 12 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Post- <br> interview | experimental | 6 | 8.75 | 52.50 | $.027^{*}$ |
|  | Control | 6 | 4.25 | 25.50 |  |
|  | Total |  |  |  |  |

* The mean difference is significant at 0.05

Table (7.11) indicates

1) There were no statistically significant differences between the two groups in their level of strategy awareness before the intervention.
2) There was a statistically significant difference between the two groups in their level of strategy awareness after the intervention, in favour of the experimental group.

The information gathered can also be represented in a qualitative form, using the values given by the pupils. On the pre-programme interview response to question one, the thought units identified by the pupils were assigned a value of " 0 " (lack of strategy),"1" (ability to process at the word level) or "2"(passive text level strategy). When asked, "what do good readers do when they read, $25 \%$ of the pupils in both groups faced difficulty in articulating their response. However, the most frequent responses in both groups were 'read lots', 'don't skip', 'reread', 'read slowly', and 'ask a question'. This shows that pupil' awareness of reading processes in both groups before intervention, as evidence of their metacognitive knowledge of strategies in reading was limited to either reflected word level strategies or passive text level strategies.

The same question was posed to pupils after intervention. The thought units identified by the pupils in the post-interview response to this question were assigned either a "3" (active text level strategy) or "4"(metacognitive strategy) value for the experimental groups. These indicated that there was an improvement in the experimental group's strategy awareness after the intervention. Meanwhile, the
pupils in the control group revealed hardly any change at their level of strategy awareness.

## Question 2: When you pick up something to read, what do you do?

This question asked the pupils to report their level of strategy use. The same question was posed before and after the programme.

The score values of the pupils' pre-and post- responses are shown in Table (7.12) shows the results.

Table 7.12: The mean rank value of Mann-Whitney in pre-and posttest for pupils in both groups on the second question

|  | group | $\mathbf{N}$ | Mean <br> Rank | Sum of <br> Ranks | Asymp <br> Sig |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pre- <br> interview | experimental | 6 | 6.83 | 41.00 | .745 |
|  | control | 6 | 6.17 | 37.00 |  |
|  | Total | 12 |  |  |  |
| Post- <br> interview | experimental | 6 | 9.25 | 55.50 | $.008^{*}$ |
|  | control | 6 | 3.75 | 22.50 |  |
|  | Total | 12 |  |  |  |

*The mean difference is significant at 0.05
Table (7.12) indicates:

1) There was no statistically significant difference between the two groups in their level of strategy use before the intervention.
2) There was a statistically significant difference between the two groups in their level of strategy use after the intervention, in favour of the experimental group.

In their pre-programme interview response to this question, almost half of all pupils in both groups mentioned that they "Don't skip" or read everything when they pick up something to read. Three pupils from both groups said they would pick a harder book and read slowly to understand the words. The remaining pupils gave responses scattered across aspects such as reading an interesting book with some pictures or sit in a comfortable place. In contrast, qualitative differences were found
between the two groups in the responses to the same question after the intervention. Pupils in the experimental group reported using more reading strategies, for example, summarising, asking questions, and thinking during reading. A number of the pupils in the experimental group tried to predict what the passage was going to be about or guess the ending of the story. On the other hand the majority of pupils in the control group reported using the same strategies as they had reported in the pre-interview before the intervention.

## Question 3: What do you do when you come to a word you don't know?

Questions 3 asked the pupils to identify the strategies they used in response to a specific reading need. To establish pre-and post-responses in term of the value of each strategy identified by the pupils, in the two groups, the totals of each numerical value were calculated, as described earlier. Table (7.13) shows the results.

Table 7.13: The mean rank value of Mann-Whitney in per-and postest for pupils in both groups on the third question.

|  | group | N | Mean Rank | Sum of Ranks | Asymp <br> Sig |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pre-interview | experimental | 6 | 5.83 | 35.00 | . 510 |
|  | control | 6 | 7.17 | 43.00 |  |
|  | Total | 12 |  |  |  |
| Post-interview | experimental | 6 | 7.67 | 46.00 | . 250 |
|  | control | 6 | 5.33 | 32.00 |  |
|  | Total | 12 |  |  |  |

Table (7.13) shows:

1) There was no statistically significant difference between the two groups in their level of strategy use before the intervention.
2) There was no statistically significant difference between the two groups in their level of strategy use after the intervention.

The above table shows that in both groups, before the intervention pupils' awareness of reading processes was limited to word level strategies and passive text level strategies.

In both groups before and after intervention, around 3 pupils for each group indicated that they would skip a word immediately or after an effort to figure it out. Similarly, the number of pupils trying to use context to figure out a work did not change significantly after intervention. Therefore, there was not much of a visible effect of this strategy instruction on the pupil's responses after intervention. This can be attributed to the fact that the method of teaching in the Arabic language system focuses more on knowing the word than figuring out its meaning using context, and it is difficult for the pupils to grasp the concept of context at the higher levels. The system of teaching in Arabic language has been explained in detail in chapter 2.

Question 4: When you come to a sentence you don't understand, what do you do?

Question 4, again asked the pupils to identify the strategies they used in response to specific reading needs. Numerical values for pre and post responses were calculated as before. Table (7.14) shows the results

Table 7.14: The mean rank value of Mann-Whitney in Per-and posttest for pupils in both groups in fourth question

|  | group | $\mathbf{N}$ | Mean <br> Rank | Sum of <br> Ranks | Asymp <br> Sig |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pre-interview | experimental | 6 | 7.17 | 43.00 | .511 |
|  | control | 6 | 5.83 | 35.00 |  |
|  | Total | 12 |  |  |  |
| Post-interview | experimental | 6 | 7.50 | 45.00 | 329 |
|  | control | 6 | 5.50 | 33.00 |  |
|  | Total | 12 |  |  |  |

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 ORIGINALThis table (7.14) shows

1) There was no statistically significant difference between the two groups in their level of strategy use before the intervention.
2) There was no statistically significant difference between the two groups in their level of strategy use after the intervention.

This table shows that before the intervention, in the two groups, pupils' awareness of reading processes was limited to passive text level strategies. For example, most of the pupils in both groups said they would skip a sentence they did not understand. They often waited for the teacher to give an explanation or waited four the group discussions. On average, only around for pupils in each group made an effort to understand the sentences by preparing the work at home, in which case they were able to ask an adult for help with the meaning of sentence. In the post programme interviews, the thought units by both groups were assigned either a " 2 " or "3" value, indicating no change in value compared to the pre-interview responses.

However, a difference was noticed between the two groups in favour of the experimental group, in that more of the pupils in this group indicated that they used a combination of strategies to figure out the meaning, for example, the combination of sounding out and using context, or sounding out the sentence and asking someone about the sentence.

## Question 5: Have you learned any reading strategies to help you remember what you read, from your teachers in school?

This question asked pupils in the pre and post interviews to report whether they had learned any strategies. In the pre-interviews, seven of the twelve pupils, including members of both groups (experimental and control) answered "No". But two pupils from both groups mentioned the strategies of rereading and word
decoding. Another two of the pupils in both groups replied that they practised reading. One of the pupils from the experimental group mentioned asking questions and answering the question after finishing the passage. In contrast, after the intervention, pupils in the experimental group showed more awareness of reading strategies than the control group did. On the post- interview, each pupil in the experimental group mentioned that she used more than one strategy, like, searching for main idea, answering the question and thinking about the passage. This shows that the intervention helped the pupils in developing strategies for reading.

### 7.5.2 Analysis of the data related to the think-aloud passage

The think-aloud measurement obtained data on reported strategies used while reading. In this section the collected data are analysed using the non-parametric Mann-Whitney test, which calculate the mean rank values and the significance of their mean value. The results of the analysis are shown in the following tables.

The following table shows the strategies frequently used by pupils in the experimental and control groups before the intervention.

Table 7.15: The strategies frequently used by pupils in experimental and control groups before the intervention ( $\mathrm{N}=6$ in each group).

| groups |  | Evaluation | Clarifying | Reread | Selfquestion | Monitoring | Planning |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pre- thinkaloudexperimental | Mean | 6.33 | 5.33 | 6.17 | 6.42 | 6.50 | 6.50 |
|  | Sum | 38.00 | 32.00 | 43.00 | 38.00 | 39.00 | 39.00 |
| Pre- thinkaloudcontrol | Mean | 6.67 | 7.67 | 5.83 | 6.58 | 6.50 | 6.50 |
|  | Sum | 40.00 | 46.00 | 35.00 | 39.00 | 39.00 | 39.00 |
| Asymp sig. for both Groups |  | . 863 | . 206 | . 465 | . 923 | 1.00 | 1.00-meres |

Table (7.15) indicates that

1) There was no significant difference in the mean rank values between the experimental and the control groups before intervention.

The strategy most frequently used by pupils in the experimental and control groups was rereading. The other frequently used strategies were evaluation and clarifying. Similar low levels of use of self-monitoring and planning strategies were found in the two groups. Table (7.16) shows the difference between the experimental and the control groups after the intervention

Table 7.16: The strategies frequently used by pupils in the experimental and control groups after the intervention ( $\mathrm{N}=6$ ).

|  |  | Evaluation | Clarifying | Reread | Self- <br> question | Monitoring | Planning |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Post- think <br> aloud <br> experimental | Mean | 8.08 | 6.83 | 6.50 | 7.33 | 8.17 | 7.50 |
|  | Sum | 48.00 | 41.00 | 39 | 44.00 | 49.00 | 45.00 |
|  | Mean | 4.92 | 6.17 | 6.50 | 5.67 | 4.83 | 5.50 |
|  | Sum | 29.00 | 37.00 | 39.00 | 34.00 | 29.00 | 33.00 |
| Asymp sig. for both <br> groups | .114 | .715 | 1.00 | .338 | .075 | .138 |  |

The previous table indicates that

1) There was no significant difference in the mean rank values between the experimental and the control groups after the intervention.

The results indicated that there was little difference between the pre- and post think-aloud task for both the control group and the experimental group, in the use of reading strategies. Even though there were differences between the experimental and control group, the results were not statistically significant.

The experimental groups showed the greatest use of planning, monitoring, self-questioning and evaluation strategies, with less use if re-reading and clarifying strategies. The control group showed a lower level of use of all of these strategies
than the experimental group. For the control group, the re-reading and clarifying strategies showed the greater use, with monitoring and evaluation the least used.

Comparing the tables showing the results before and after the intervention suggests that for each strategy, the following occurred in relation to intervention:
-Planning: the experimental group made some gains while the control made some loss.
-Clarifying: the experimental group made some gains while the control group made some loss.
-Rereading: both groups made similar increases.
-Self-questioning: there was a slight gain for the experimental group and a slight loss for the control.
-Monitoring: the experimental group made a considerable gain, while the control group made a considerable loss.
-Evaluation: the experimental group made a considerable gain, while the control group made some loss.

The qualitative analysis showed that the experimental group pupils reported using substantially more reading strategies, like reading and thinking during their reading; making reading plans; summarising, asking questions and rereading. Moreover, all pupils in the experimental group made some change by combining the use of more than one or two strategies in the post think-aloud passage. In contrast, the control group reported strategies which had either no strategic value or ones that reflected only word level strategy, like asking questions, going back over the text, answering the question when they finished reading the text and reading slowly.

### 7.6 Summary

The research questions concerning ways of tackling pupils' reading comprehension needs and the effectiveness of a Reading and Thinking Strategy programme were addressed in the pilot and main studies, the result of which have been reported.

The pilot study yielded significant pre-post differences on the reading comprehension test, and on three out of four tested dimensions of the IRA, in favour of the post-test.

In the main study, the main findings were that the gains for the experimental group were significantly higher then for the control group on all dependent measures, with effect sizes ranging from .98 for self-perception to .78 for reading comprehension. Further analysis confirmed that there were significant gains experienced by the experimental group in the Index of Reading Awareness individual strategies of evaluation, planning, regulation and conditional knowledge. This quantitative evidence of the effectiveness of the experimented programme in increasing pupils' knowledge and use of reading comprehension strategies was supported by the quantitative and qualitative findings from the metacognitive interviews and think-aloud protocols. The experimental group showed significantly higher post-intervention awareness of reading strategies than the control group, and their strategies' use. However their responses in relation to specific reading needs showed less gains in relation to the intervention. Moreover, the think aloud exercise revealed that, following the intervention, the experimental group, unlike the control group, combined strategies. They also made more use of evaluation, self-questioning, monitoring and planning.

The implications of these findings will be discussed in depth in the next chapter.

## CHAPTER EIGHT

## INTERPRETATIONS, IMPLICATIONS, CONCLUSIONS, AND RECOMMENDATIONS

### 8.1 Introduction

This chapter presents first of all, a summary of the study including its purpose, significance, and the research questions. Second, it discusses the study results including results of the exploratory study, pilot study and the main study.

In addition, the interpretations, implications, conclusions, and recommendations that follow from the results presented in chapter seven are discussed. These results relate to the effectiveness of the intervention programme that was tested in this study. This section will try to provide the reader with an overall evaluation of the objectives of the study and an assessment of how metacognitive strategies can be effective in teaching comprehension.

### 8.2 Summary of the Study

The purpose of this study was to investigate whether strategy instruction in a metacognitive intervention would improve reading comprehension for fourth grade Arab (female) pupils. In addition, the aim was to explore how metacognitive strategy instruction would affect pupils' reading awareness and self-perception. A reading comprehension test, a cloze test, and a reading achievement test measured the reading comprehension of the pupils in this study. Pupils' reading awareness and self- perception were measured by using an index of reading awareness (IRA) questionnaire and a self-perception questionnaire. Metacognitive processes were measured by using a metacognitive interview and think aloud procedure.

The significance of this study ensues from the fact that there is a debate in the literature regarding the effects of metacognitive strategy instruction on reading comprehension (Paris, Wasik, and Van der Westhuizen, 1988; Ward and Traweek, 1993; Angelo and Cross, 1995). The researcher believes it was necessary to carry out this study with Arab readers in Qatar because:

1) Arab curriculum, teachers and pupils should know how to plan for metacognitive strategy instruction.
2) This study was the first of its kind with Arab pupils in Qatar. This would add to our cultural understanding of the ways in which to carry out metacognitive instruction.
3) It was hoped that the findings of this study would support the available findings on the effects of metacognitive instruction on first language pupils reading comprehension.

### 8.3 Research Questions

This study was carried out to answer the research questions presented below:

1) What are the comprehension learning needs of fourth grade pupils in Qatar and how can they be addressed?
2) What assessment techniques may be helpful in understanding reading comprehension?
3) Does the reading and thinking strategies programme adopted in this study affect pupils' performance on reading comprehension?

### 8.4 Discussion of the study Results

In this section the researcher presents the discussion of the results of the exploratory study, pilot study and main study, as shown below. Results investigating
the effects of the metacognitive process and in-depth analysis for the experimental groups that received the intervention programme are also presented.

### 8.4.1 Exploratory study

This section describes the conclusions drawn from documentary evidence and exploratory interviews, and answers the first part of the first question, " What are the comprehension learning needs of fourth grade pupils in Qatar and how can they be addressed?"

It was found that the education system in Qatar is centralised which means that a national curriculum is set for every subject matter, which all teachers must follow. Moreover, all schools use the same teaching materials. Even the methods of planning teaching, organisation and management of the classroom activities are the same in all schools. Way of assessing pupils' achievements are prescribed. Teachers may vary the classroom techniques to some extent, but teaching is always very teacher-directed.

More specific insights into the Qatari context of teaching reading comprehension were obtained from a series of exploratory interviews. Teachers' procedures vary when teaching reading for the fourth graders in Qatar, but their major objective is to teach reading as a general skill of the Arabic course for this grade. Reading both silently and aloud, 'class discussion' and 'underlining the new and difficult vocabulary' were the most commonly used techniques. The centralised curriculum may have limited the opportunity for them to develop their own plans to cater for the various needs of the learners.

The interviewed teachers focus on equipping their pupils with reading skills, word recognition, and grammar. It appears that pupils are not taught the strategies of comprehension and thinking while they read a passage.

The similarity of interviewees' responses regarding the reading process and levels of reading comprehension taught at the target stage reflected the constraints of the centralised system of education in Qatar, which leaves no scope for teachers to develop pupils' progress through the levels of comprehension at their own pace. Different perceptions of the importance and objectives in dealing with the reading comprehension, reflected the subsuming of reading comprehension under the general Arabic language curriculum, rather than seeing it as a distinct skill in its own right.

The review of the education related documents led to the conclusion that the presence of different nationalities (non-Arabs like Indians, Pakistanis, Iranians and Arabs) might affect the teaching of Arabic in the elementary grades, since non-Arab pupils speak Arabic inside the classroom, English outside, and their native language at home. This could also influence the pupils' interaction among each other and with their teacher, who might not be highly motivated to teach in such an environment.

The interview responses indicated that the teachers of the target grade lacked training and experience in assessing reading comprehension. They relied on their observations of pupils' performance in the classroom and their achievement in school examinations, to identify comprehension difficulties. They were also limited in their strategies for responding to such difficulties. Most of them used no methods other than asking the pupils to reread the text. Lack of knowledge indicates the need for teachers to learn more about reading comprehension difficulties and modern strategies of teaching reading comprehension. The interviews held with the teachers helped the researcher to deduce that the majority of teachers do not provide comprehension instruction. It was also found that there was little attempt to involve parents in helping to develop pupils' reading skills. Despite the deficiencies in the teaching of reading comprehension at present, teachers were clearly interested in learning more about how to diagnose and address difficulties in reading
comprehension. The exploratory study suggested the importance of the implementation of a teaching programme with innovative assessment activities.

On the basis of the result of the study, the researcher has concluded that the teachers have no specific approaches to evaluate the pupils' weakness in comprehension and show a need for interventions to enhance their pupils' reading comprehension skills.

### 8.4.2 Pilot Study.

The pilot study addressed two of the research questions:
Research question 2: What assessment techniques may be helpful in understanding reading comprehension? and

Research question 1: What are the comprehension learning needs of fourth grade pupils in Qatar and how can they be addressed.

### 8.4.2.1 Assessment techniques

Teachers should use a variety of assessments to appraise pupils' achievement in reading and reading comprehension. Many researchers have suggested the use of multiple approach to assess reading comprehension because using only one type of measure to assess pupils' reading comprehension may not be reflective of all that they have comprehended in some cases (Shohamy, 1984; Wolf, 1993 and Ediger, 2000). According to Ediger (2000) multiple appraisal approaches might include observation and subsequent diagnosis in such areas as level of achievement, attitude, progress, and comprehension.

The following are the assessments that the researcher found helpful in the pilot study and used in the main study.

The Reading Achievement Test- This measure was already used in the school system to measure performance on the contents of the national curriculum of Arabic. This test was found helpful for the teacher for many reasons. First, because this test provided a standardised reading ability score of the pupils' performance in reading. Second, this standardised score helped the teacher to determine what to teach to increase pupils' achievement in practising reading. Finally, this test was also found to be helpful for the evaluation of the amount of time that pupils spent in practising reading at school or at home. Several studies have found high positive correlation between reading achievement and practice reading (Cunningham and Stanovich, 1991; Elley, 1992).

Reading Comprehension Test: This measure was developed by the researcher to measure the pupils' understanding of silent reading texts and determine areas of strengths, weaknesses and evaluate progress in reading related to the adapted programme (Reading and Thinking Strategies). In addition, it is a measure of assessment of the pupils' abilities to choose the most appropriate title for the text, recognition of word meaning, simple recalling skill, conclusion skill, perception of cause-effect relations, and understanding the main idea and the general idea. The pilot study demonstrated a high level of reliability for the test developed by the researcher. This test was helpful because it provided the researcher and the teacher which detailed feedback on pupils' reading comprehension progress and the programme's effectiveness and helped to diagnose pupils' special comprehension needs. The researcher developed two equal versions of the test for use in pre and post assessment, in order to eliminate the testing threat of repetition by sensitisation to the post-test, posed by pupils who have already taken the pre-test. The test requires considerable application of metacognitive knowledge. This assessment presents an easy guideline for the teacher. The instructions, the purpose and key elements,
including time required to administer the assessment, are described on one page. Scoring of this test does not require prior training, and it is not time consuming, which encourages teachers to use it.

Cloze Test: The ability to fill out blanks with appropriate words requires a number of abilities related to competence of language. These abilities may include reading skills and strategies, knowledge of vocabulary, discourse, and grammatical structure. It is believed that successful performance in taking a cloze test taps into all of the abilities, which are the essence of general language proficiency. Therefore, the cloze procedure was used in this study, first to measure the strategy the readers used to comprehend a reading text, and second, because it required readers during reading to understand the meaning of the entire passage and to construct appropriate responses, rather than to select multiple-choice alternatives. The reliability for the cloze measure used was high when compared with Hosseini and Ferrell's (1982) similar cloze test when the test was given in the subjects' native language. This test was found helpful for use in this study and for the teacher and it also provides a model of an assessment approach which teachers can use to develop their own tests, with different levels of difficulty.

The fact that this procedure appeared to be a valid and reliable method of assessing reading comprehension skills support Hosseini and Ferrell's (1982) argument that supplying a missing word was a measure of comprehension, and that knowing which responses are accurate and which are not is a measure of metacomprehension. They stated that skilled reading requires not only perceptual cognitive activity, but also metacognitive activity. This procedure was found to be of great importance in measuring the reading comprehension of native speakers. It was found useful in elucidating and evaluating aspects of metacognitive performance in reading comprehension that make use of the capacity to recognise failures in
comprehension processing (Hosseini and Farrell: 1982). It was similarly found to correlate highly with other measures of metacognition in reading comprehension in the present study.

Index of Reading Awareness: The Index of Reading Awareness (IRA; Paris and Jacobs 1987) is a multiple- choice questionnaire that measures pupil's knowledge of reading strategies, including evaluation, planning, self-regulation, and conditional knowledge. The IRA has been shown to be reliable and at least marginally valid, as well as generalisable to elementary school pupils (Osborne, 1998; Jacobs and Paris, 1987 and Stevens and Slavin, 1995). For the Arabic version used this study, the Cronbach's alpha reliability coefficient was 0.81 . This indicated a good level of reliability when compared to all of these studies. This scale is helpful for teachers to use because it can detect improvements between pupils trained in two different reading approaches and across different age groups. The test has been shown to be easy to use, easy to respond to, and can be interpreted for pupils on an individual level.

### 8.4.2.2 How learning needs can be addressed

The pilot study showed the value of the intervention programme (Reading and Thinking Strategies) in addressing the comprehension learning needs of Qatari fourth grade Arab pupils, using an Arabic version of the programme. The results indicated that there were statistically significant differences between the pretest and posttest scores for each of the individual components of the index of reading awareness (evaluation, regulation, and conditional knowledge, but not the planning component), for the reading comprehension and the Cloze test, in favour of the posttest. This finding leads to the conclusion that such a programme can be helpful in addressing the comprehension learning needs of $4^{\text {th }}$ grade Qatari pupils, but special
attention needs to be given to the planning component. The pilot study results justified the use of the Arabic version of the intervention programme for collecting data from a similar target population for the main study.

### 8.5 Interpretations of the results related to the effectiveness of the programme

The main study looked at the effectiveness of the developed and piloted programme in comparison with the traditional approach to teaching reading comprehension in Qatar. It therefore addressed the first and third research questions, namely:

Question 1- how can the comprehension learning needs of fourth grade pupils in Qatar be met?

Question 3- does the Reading and Thinking Strategies Programme adopted in this study affect pupils' performance on reading comprehension?

The effectiveness of the programme will be discussed in terms of the findings for each main dependent measure.

### 8.5. 1 Reading comprehension

When the pupils were tested in reading comprehension after intervention, a significantly greater improvement in reading comprehension skills was found in the experimental group as compared to the control group. These results show that the reading and thinking strategies programme was effective in improving reading comprehension performance. This finding is similar to those of (Paris, Coss, and Lipson, 1984; Paris and Oka, 1986; Winograd and Paris, 1989, Woodward, 1991). All of these studies indicate that reading comprehension can be enhanced by applying a metacognitive approach to the teaching of reading comprehension. The results also support previous findings that raising pupils' metacognitive awareness facilitates reading comprehension (Palincsar and Brown, 1984). All of these studies,
including the present one, suggest that a metacognitive approach to the teaching of reading comprehension allows for transferring of the metacognitive skills to a more general measure of reading comprehension.

### 8.5.2 Cloze Test

Pupils' use of reading comprehension strategies was measured by quantitative analysis, using the Cloze test. The Cloze test showed a significantly greater increase in mean values for strategy skills for the experimental group as compared to the control group, as indicated by their gain scores. Cross and Paris (1988) who examined the effects of metacognitive instruction on pupils' cloze test comprehension levels, obtained similar findings. They studied these effects on thirdand fifth-grade pupils, and the data obtained from these tests showed that the pupils in the experimental group made significant gains in both their metacognitive awareness and strategy use when compared with control pupils. Hosseini and Ferrell (1982) also showed that a metacognitive intervention was effective in the experimental group when measured by the Cloze test. This improvement indicated increased ability to make use of grammatical structure and word patterns in their reading skills. This intervention approach was recommended by Hosseini and Ferrell as a means to help pupils utilise both their linguistic and non-linguistic skills for global meaning.

### 8.5.3 Reading awareness

Quantitative findings on pupils' strategy awareness were obtained by using the Index of Reading Awareness (IRA), which yielded not on overall result on overall strategy awareness but also awareness of individual strategies. This measure therefore addressed key aspects of metacognitive knowledge. The main study found
that the metacognitive approach had a significantly greater effect on the Reading Comprehension Awareness measure as a whole, than the traditional approach. This was supported by the high educational effect size of 79

In addition, Witherspoon (1996) found that systemic instruction in four contemporary metacognitive strategies was associated with significantly greater gains in metacognitive awareness compared with a control group. There was a significant positive relationship between the increase in metacognitive awareness and achievement levels in comprehension.

All of these studies therefore support the view that a specific metacognitive interaction approach is effective in enhancing extra attention paid to the planning comprehension in the main study, in the light of the pilot study identified need for attention to this components were shown to increases significantly for the experimental group in association with the metacognitive programme.

### 8.5.4 Self-perception

Self-perception was measured by the RSPS. The metacognitive approach was effective in changing perception score was significantly enhanced after the intervention, whereas that of the control group remained virtually unchanged.

It is concluded those pupils' positive self-perception of academic competence and actual reading achievement increased in association with the intervention, for the experimental group. It also endorsed the importance of motivational factors, as proposed by Ehrlich, Kurtz-Costes, and Loridant (1993) who attempted to examine cognitive, metacognitive, and motivational factors as predictors of individual differences in reading comprehension abilities of good and poor readers. Paris and Oka (1986) also examined the factors that best predict children's reading comprehension's achievement. They suggested that among young
and less skilled readers, reading was less influenced by motivation and metacognitive awareness, while among high readers, positive self - perceptions and metacognitive knowledge were significant predictors. The next section will sum up the findings in relation to three different levels of readers and their individual differences in interacting with the programme, in the present study.

### 8.6 More Data Analysis related to the effectiveness of the metacognitive approach, for the experimental group

Further analysis was conducted to explore the effectiveness of the programme for the experimental group. Comparison was undertaken of the gains made by pupils classed as having high, moderate or low reading comprehension ability. On general reading comprehension, there was less difference between the groups in response to the metacognitive programme, than on the Index of Reading Awareness. This indicates that for low ability readers, motivational factors may need greater positive attention, in further application of the programme. This supports the work of Lipson, Irwin and Poth (1986) who found that better fifth grade readers scored significantly higher than did poor readers on Index of Reading Awareness. Paris and Myers (1981) reported that poor readers were less aware than were good readers of harmful strategies that would interfere with reading such as watching television while reading, but that the good and poor readers were equal in their ability to recognise useful strategies. That metacognitive awareness can be gained through instruction is evident from the overall experimental group finding that Index of Reading Awareness measure shows significant differences between pretest and posttest for all the individual components. A significant gain was found in the evaluation, planning, conditional knowledge and awareness components in association with the intervention programme.

According to Watson (1996), the development of metacognition in poor learners shows marked delays. Watson considers that such learners fail because they have less knowledge about tasks and they fail to make use of the knowledge and skills they have. Watson pointed out that these pupils need metacognitive help to improve their self-regulation and monitoring of learning. The fact that in the current study the programme seemed to be less effective in ameliorating their metacognitive awareness may be due not to the programme itself but to its contextual application. Possibly had it been applied to them with special care and attention, better results could have been attained.

One of the objectives of the pilot study part of the research was to prove that significant improvement related to the application of these four components was maintained with the experimental group. Not only was this the case, but planning, which was less affected in the pilot study, was also improved after revision of the programme, and sustained.

### 8.7 Metacognitive Interview and Think Aloud Passage.

When pupils' reading comprehension strategic skill knowledge and use was investigated using the metacognitive interview questions, the twelve pupils studied showed a significant advantage to the six experimental group pupils, in association with the metacognitive approach. This advantage was in knowledge of what good readers do when they read, and in level of reported strategy use, but not in the more specific strategies addressing specific word approach and sentence approach. The findings of increased strategy use were supported from the think-aloud protocols, in terms of gains for the experimental group in planning, clarifying, monitoring and evaluation strategies, although not to a level, which was significantly different from that of the control group.

This strategy development affirms the value of a metacognitive approach to reading comprehension, and the value for planning strategy use is noteworthy, given the attention to this aspect in the main study. It should be note that the think aloud protocol is a verbal report of data, and not all of the strategies used may have been verbally reported. The actual use by the experimental group may actually have been greater, and at a level approximating more to statistical significance.

Also, think - aloud technique has its own limitations as the results largely depended on the researcher's subjective analysis of the data. Moreover, the fact that pupils were asked to report their mental activities during the process of reading may have disrupted their natural reading process, and the data collected therefore may not reflect their natural strategic approach to reading. However, it has been claimed in previous research studies (Hosenfield, 1977) that think - aloud protocols have proved useful as a means of revealing how readers approach difficulties in reading.

Carriedo and Alonso-Tapia(1995) and Nicaise and Gettinger(1995) showed that pupils improved their comprehension monitoring when they were trained in strategy use. Strategy use helped the pupils change the rate of speed at which the passage was read, and go back and reread parts of the passage which did not make sense, thus improving their reading comprehension skills.

Another noteworthy finding is the positive motivation that appears to be associated with the metacognitive approach, reflected in the result that more pupils in the experimental group than in the control group considered that they had learned positive strategies.

### 8.8 Overview

This study has shown that training pupils in metacognitive skills improved their reading comprehension skills by enhancing, metacognitive awareness, and
strategy awareness, and strategy use instruction in these fields leads to awareness of metacognitive skills. Metacognitive questions allow the pupils to become conscious of their thoughts and feelings and they can become independent learners who monitor their own reading comprehension, which is the ultimate goal of reading (Wagoner, 1983). Teaching the pupils metacognitive skills at a young age helps them to improve their reading comprehension, and become active learners in the reading process. It also allows the transferability of thinking skills as the pupils are challenged with more and more difficult reading texts.

Self-perception also plays an important role in the reading comprehension process. Paris, Newman and McVey (1982) see this self-perception as involving selfknowledge and self-control, which encompass the factors of commitment, attitudes and attention, whereas self-knowledge and control of processes encompass selfappraisal and self-management. Self-appraisal consists of three components: declarative knowledge (an understanding of the factors affecting reading), conditional knowledge (to know when a strategy is needed and why it will help) and procedural knowledge (to know why and when to use strategies). The experimental group made significantly greater gains in reading awareness, which incorporated self-appraisal. This shows that the pupils are able to evaluate their own performance actively as they develop reading skills and monitor their own progress.

This research also indicates that the different aspects of reading comprehension, metacognitive knowledge, strategy use, self - perception and motivation are related to reading achievement. For example, through the findings of the research a high correlation was found between self-perceptions regarding reading and actual reading achievements. The metacognitive approach to the teaching of reading has been shown to be more effective in enhancing reading achievement and reading comprehension than the traditional approach used in Qatar schools.

As it was argued in the research that reading is an application of cognitive and metacognitive skills, the difference in reading achievement between the experiment group and control group was significant, in the sense that the former seemed to benefit more from the application of the programme. The strategies used are functional and meaningful, as they were selected mainly to enhance the performance of pupils in reading comprehension skills.

### 8.9 Implications of study results

### 8.9.1 Implications for Research

The following implications can be suggested for reading research based on this study:

1) The intervention in this present study was implemented for three months. This length of time was similar to that of other research using Paris' metacognitive approach and was long enough to make an impact on the pupils' reading skills, but it was insufficient to investigate long-term effects of metacognitive strategy training on fourth grade pupils in Arabic. If such experimental programmes ran for a longer time and were incorporated into the regular curriculum instruction it would allow researchers to refine instructional techniques, to explore the use of additional metacognitive strategies, to eliminate strategies that are not productive and to systematically observe and evaluate individual pupils' performance. This would allow a more thorough assessment of the programme on pupils' reading comprehension.
2) Further addressing of motivational factors is suggested as important, particularly for low ability readers.
3) Ways of including parents should be explored.
4) Investigation is needed of the attitudes of the teachers towards teaching programmes of reading comprehension and thinking strategies and the difficulties they encounter in teaching such programmes. Also the influence of teacher characteristics such as gender, race, training and years of experience and school settings, such as size, organisation and community should be investigated.
5) The effects of the pupils' background knowledge, culture and altitudes on the programmes of reading comprehension and thinking strategies merit investigation.
6) This study was limited to one school in Qatar, and because the researcher was female, involved only female pupils. Further exploration of the generalisability of the programme to other school populations in Qatar would be of value.

### 8.9.2 Implications for instruction

Based on the results of this study, the following instructional implications can be suggested for teachers of Arabic in Qatar:

1) Metacognitive strategy training can be used as a tool to improve instruction in teachers. The teachers may benefit from examining metacognitive strategies and learning constructs, which would help their pupils to develop metacognitive skills. Using a systematic direct instructional model may help them to reinforce their own knowledge of these strategies.
2) Involvement of teachers and pupils in these types of metacognitive strategies may create an environment where pupils are actively engaged in the learning process and in developing their reading skills with the help of teachers, pupils can use these skills to develop an awareness of their own reading processes and learning
strategies. This will help them to regulate their own reading and develop into active and strategic readers of Arabic. Pupils will be able to identify important points in a reading text, build relationships between concepts and idea and able to construct meaning. This will also give the teachers chance to learn how their pupils process information and interact wit text, and how they build understanding of reading material.
3) The Index of Reading Awareness questionnaire will help the teachers gain a better understanding of pupils' learning strategies and reading processes. This will help them instruct the pupils better in the regular curriculum. Knowing exactly what their pupils need will allow them to develop a firm instructional strategy.
4) It was seen in the exploratory study that teachers followed one national curriculum, which describes the methods and procedures for teaching reading as part of the Arabic language lesson, not as a separate lesson. Thus, teachers concentrated on teaching pupils what to read rather than how to read. It is important that teachers have the opportunity to deal with the reading process and levels of comprehension at their own space. It is also important to understand the particular metacognitive needs of the low ability reader, including the motivational needs.
5) An important point to keep in mind is the long-term effect of this study on pupils' reading skills. It is important that the pupils are able to maintain these acquired skills and implement them over a period of time, not just for the duration of the study. To achieve this, it may be necessary to adapt some of the strategies and mould them to suit the pupils' particular requirements in the long run.

### 8.10 Recommendations

1) The Qatar MOE should explore the use of this approach in other school populations.
2) Metacognitive strategy training should be incorporated into the Arabic curriculum as part of teacher training programmes, in an attempt to improve Arab pupils' reading comprehension. It is suggested as beneficial to add knowledge of these strategies to knowledge of the traditional teaching method used in Arabic classrooms.
3) In service training on teaching approaches for developing strategic thinking in reading comprehension would be of value.
4) The MOE should encourage schools to create a more active learning environment that provides the learners with better proper opportunities for learning reading comprehension and thinking strategies in Arabic and other subjects.
5) When working on the development of a strategic approach to reading comprehension in Qatar, writers, assessors and teachers should take into consideration the following factors:
i) The cultural dimension should be considered and careful attention be paid to the adaptation of any programme to meet the unique cultural needs of Qatari readers.
ii) The content of the material should meet the special needs and interests of learners.
iii) The training should give adequate attention to both metacognitive knowledge and metacognitive strategy use.

In conclusion, this field of study is relatively new, with research on the effects of metacognitive strategy training on reading comprehension being developed in the last two decades. This study is a very modest beginning in the study of metacognitive intervention in pupils of Arabic language and its effects on reading comprehension skills. Further studies in this field will greatly enhance the research findings and help improve Arabic reading instruction in schools. The positive outcomes of the metacognitive strategy training, on a multiple set of measures, suggests that such an approach can be effective in the Arabic context, and is worthy of further development.

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Appendix 1

## Appendix 1: Questions of the Interview with the Teachers

1. What is happening in reading at this level?
2. What kind of reading comprehension is provided for pupils at this level?
3. What skills of reading comprehension are taught at this stage (that is, what do you teach about the reading process?).
4. What are the different levels of teaching comprehension?
5. What importance do you place on the teaching comprehension e.g. how much time do you devote to it?
6. Which method or methods do you use to teach pupils reading comprehension?
7. How do you identify that a pupil has a reading comprehension difficulty?
8. When discovering that a pupil has a reading comprehension difficulty, how do you measure it? Do you consider this adequate? If so, why? If not, why?
9. If you know that a pupil has a reading comprehension difficulty how do you deal with it?
10.Are your methods used for dealing with reading comprehension difficulties effective? If so, why? If not, why?
11.Do you inform and involve the parents? What role do they play?
12.Do you inform and involve the pupil? What role do they play?
10. What do you feel you need in order to help pupils with reading comprehension difficulties?
14.Is there anything else, which you think, may be useful for me to know about comprehension teaching here?

Appendix 2

Appendix 2: After-interview with Teachers Checklist

|  | Statement | All the <br> time | Most of <br> the time | some <br> time | hardly <br> never |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | Recognise some of the new vocabulary and its <br> meaning in the written passage |  |  |  |  |
| 2 | Match between the vocabulary and its meaning <br> in the written text |  |  |  |  |
| 3 | Recognise synonyms and antonyms |  |  |  |  |
| 4 | Use some of the vocabulary in meaningful <br> sentences |  |  |  |  |
| 5 | Recognise the different types of the sentences; <br> verbs, structures |  |  |  |  |
| 6 | Recognise demonstratives, relatives, and <br> interrogative words. |  |  |  |  |
| 7 | Give examples of inflections |  |  |  |  |
| 8 | Change verb-tense |  |  |  |  |
| 9 | Change from singular to plural |  |  |  |  |
| 10 | Change from verbal to nominal |  |  |  |  |
| 11 | Recognise the wrong pronunciation: letters, <br> words. |  |  |  |  |
| 12 | Recognise the wrong pronunciation in written <br> words, Recognise silent letters... |  |  |  |  |
| 13 | Recognise similar sounds, like s, z... |  |  |  |  |
| 14 | The soft pronunciation of certain words |  |  |  |  |
| 15 | Recognise silent letters such as, alif, waa al <br> jamaa, lam shamsia- |  |  |  |  |
| 16 | Organise the ideas logically. |  |  |  |  |
| 17 | Recognise main idea |  |  |  |  |
| 18 | Recognise supporting details |  |  |  |  |

## Appendix 3



Name:
School:
Class:
Date:

Age:
The score

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 2. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 3. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 4. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 5. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 6. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 7. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 8. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 9. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 10. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 11. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 12. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 13. |  |  | $\mathbf{C}$ |
| 14. |  |  |  |
| 15. |  |  |  |

## The First Text

Read the following text then answer the question below it:
The soul is purified and cleaned up by prayer and brightened by all types of good deeds
life is built upon the prayer and prosperity
(1) What is the meaning of the poem:
(a) The prayer
(b) Good qualities
(c) Islam

## The Second Text

Read the following paragraph below. Identify the kind of reading and the main idea of the paragraph:
Reading habit is developed among us when we got trained upon it since our childhood. The reading has a big importance as it gives our minds knowledge and culture. It develops our hobbies, and gives us ability to dialogue and understanding along with self-confidence and others' respect.
(2) Circle the correct answer:

This passage is a:
(a) Description
(b) Explanation
(c) Comparison
(3) Circle the letter of the best choice:

The main idea is:
(a) Our duty towards reading
(b) Importance of reading
(c)Pupils role as to reading

## The Third Text

Read the following text. Then use the context to figure out the meaning, by putting ( ) sign before meaning of the appropriate word:

Khalid woke up with a feeling of pain in his stomach so his mother called the doctor. After a check-up. the doctor advised him to stay in his bed and prescribed him necessary drugs. Whalid followed all of the doctor's advice and recovered his health.
(4) The word recovered means:
(a) regained
(b) complete
(c) continue
(5) The word executed means:
(a) fulfilled
(b) responded
(c) confirmed
(6) The word guidance means:
(a) marks
(b) instructions
(c) remarks

## The Fourth Text

Read the following text then answer the question below it:

- Yesterday 1 saw a beeYellow like the gold

Flying from a flower to another nice sweet-smelling one
Oh mother what does bees mean by this playing
Bees do not play Oh my son, but they work
Without these we wouldn't have this honey to eat
(7) What is this text about?
(a) the bees
(b) the flower
(c) the honey

## The Fifth Text

Read the following paragraph. Weave the ideas together as you read. Then read the question. Circle the answer that states a detail that is suggested by story ( )

- A woman had a hen that used to lay an egg every day. She said to herself, "How can I make my hen lay two or three eggs?" She thought then decided to give the hen more food. Instead, she got a smaller size of egg. She thought that the food was not enough and began to force her hen to eat more food till its stomach was swollen.
(8) What do you think will happen:
(a) The number of eggs increased
(b) The size of eggs increased
(c) The hen died


## The Sixth Text

(9)Look at the following four sentences. Read the sentences and think what happened first and what happened next. Number the sentences in the correct order.
$\qquad$ when he picked it out he found it empty. He cast it back and threw his net again towards the shell.
$\qquad$ While he was preparing his net to throw it into the sea, he saw a shell. He thought it was a pearl.
$\qquad$ He threw his net towards it and when he pulled it out he found a fish big enough for his

Read the following passage. Then answer the literal, inferential personal and questions about the reading.

Once upon a time there was an unjust ruler, every year he used to appoint an assistant to him. At the end of the year he throw him to dogs after making them very hungry, which eat the man. Once one of his assistants knew that he would face the same fate. So, as from the tenth month began to feed dogs till they loved him. When the fixed date came they threw the assistant to the dogs but they did not hurt him, instead they showed him love. The unjust ruler was astonished and asked his assistant about the reason, he said, "I have served you a complete year then you threw me to hungry dogs to eat me, whereas I served these dogs only two months, but they behaved as you have seen".
(10) Literal

What is the ruler represents character:
(a) He likes changing
(b) He dislike assistants
(c) He has little loyalty
(11) Inferential

Behaviour of the assistant refers to:
(a) fear
(b) good behaviour
(c) love of dogs
(12) Personal

The dogs behaviour refer to:
(a) satisfy (full stomach)
(b) Loyalty.
(c) love of the assistant

Read the following story. Then answer the question by putting () mark in front of the correct answer:

- A fox felt very hungry. It roamed in the fields and gardens looking for a chicken to allay its hunger, but in vein. It entered into a small cave.

It thought there might be the remains of a prey, but found nothing. It sat down thinking of its bad luck. It felt a light stinging, but it moved to another part of the body. It was stretched on the ground and began to roll its body on the ground, hoping to kill what was staining it or to reduce the pain, but the stinging increased.

The fox knew that fleas were in the cave and gathered on its body. What should it do? How could it get rid of them? It forgets its hunger. It had to think of a trick to get rid of these cursed fleas. Of course, the fox is famous for plorting trick! After a while of thinking, it found this trick. It went to nearby river. It went swimming and immersed its tail in the water. The fleas came out of the tail and on the body. It began to immerse little by little and the fleas came up gradually until they were all gathered in its mouth. Then it immersed its mouth for a while. As all fleas came up to the surface of the water, it dived below it and came out, leaving the fleas behind it. It came out of the river laughing, and shaking water off its body. It felt hungry, and went looking for a prey to allay its hunger.
(13) Where did the fox roam in the story?
(a) in the village
(b) in the filed and gardens
(c) in the forest
(14) How did the fox forget its hunger?
(a) because it found something to eat
(b) because it felt a severe stinging
(c) because it swam in the water
(15) What was the feeling of the fox when he got rid of the fleas?
(a) hunger
(b) joy
(c) thirst

School:Date:
$\qquad$Class:
$\qquad$Age:The score

|  |  |  |  |
| :---: | :---: | :---: | :---: |
| 1. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 2. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 3. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 4. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 5. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 6. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 7. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 8. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 9. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 10. | $\mathbf{B}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 11. | $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ |
| 12. | $\mathbf{A}$ | $\mathbf{B}$ |  |
| 13. |  |  |  |
| 14. |  |  |  |
| 15. |  |  |  |

## The First Text

Read the following text then answer the question below it:
(1) The beautiful rose is like childhood

Like flowers in the wood same as daytime
Oh my brother small children do not pick flowers
(1) What is the meaning of the poom?
(a) The beautiful rose.
(b) Small brothers.
(c) Do not pick flowers.

## The Second Text

Read the following paragraph below. Identify the kind of reading and the main idea of the paragraph:
(1) A pigeon alighted on a riverbank and started weeping. A fish peeped out and said to it, "Why are you weeping my friend?" "Are you sick?" The pigeon? Said, "I am weeping because when I returned to my nest I missed my daughter, she must have been lost". The fish said, "Look for it properly, weeping will not help, and will not return your daughter back to you". Then the pigeon flew and began to look for her lost daughter.
(2) Circle the correct answer:

This passage is a:
(a) Description
(b) Explanation
(c) Story
(3) Circle the letter of the best choice:

The main idea is:
1- The pigeon returned back to its nest and missed its daughter.
2- Weeping would not return the pigeon to its daughter.
3. The pigeon was looking for its lost daughter.

## The Third Text

Read the following text. Then use the context to figure out the meaning, by putting ( ) sign before meaning of the appropriate word:

- The human body contains hundreds of muscles distributed among all parts of the body.

These muscles carry out important role in human life since his birth, they produce internal body's heat, moves the food, pump air in the lungs, make us move and run. Oh great Allah who created them.
(4) The meaning of word " distributed" is:
(a) Separated.
(b) Group.
(c) Lay down.
(5) The word "pump" means:
(a) To rise.
(b) To get down
(c) To push.
(6)The word "run" means:
(a) To present.
(b) To give.
(c) To hurry.

## The Fourth Text

Read the following paragraph. Weave the ideas together as you read. Then read the question. Circle the answer that states a detail that is suggested by story ( )

- A lady declared her interest to lease her own house. She wrote a big signboard on the house stating that: The family wishes to lease this house, to who has no children.

Somebody knocked the ladies door, she found a child of seven years. The child said to her "My dear lady, I would like to hire your house, there are two boys with me and I do not have any children".
(7) What do you think will happen?
(a) The lady drove him away.
(b) She insisted upon her condition.
(c) Pleased and leased the house to him.

## The Fifth Text

## Read the following text then answer the question below it:

Muslims used to urite the Holy Quran soon and earlier by order of the Prophet Mohamed, maj God be pleased with him. When a verse is revealed to him through Jebreel, peace upon him. so learned and memorized by the Prophet Mohamed the Prophet used to ask his companions to write it. After the whole Quran was revealed to him they memorized it all and wrote it on sheets. Muslims continued to write Quran and memorize it and stuck to teach it to their children. Therefore, each Muslim tries to own one copy or more of the Holy Quran. He keeps it in a clean place in his house to read it he and his children.
(8) What is this text about?
(a) Muslims urite the Holy Quran by order of the Prophet Mohamed, may God be pleased with him.
(b) The Prophet Mohamed, may God be pleased with him learns the Holy Quran.
(c) Every Muslim owns one or more copy of the Holly Quran.

## The sixth text

Look at the following four sentences. Read the sentences and think what happened first and what happened next. Number the sentences in the correct order.
$\qquad$ He returned back to the Kaaba's square, he found a man calling out in search for its lost bag.
$\qquad$ He gave the bag to its owner but he did not take it and said "It is for you along with a gift because I am a rich man".
$\qquad$ Inside he found one thousand Dinars. He took it to the house but his wife said to him: I shall not accept this money, go back and look for his owner
$\qquad$ A poor man went out in Mecca looking for work, but he did not get. He went to the Kaaba and prayed two rka'as (prostrations) and went back. In the Kaaba's square he found a bag, he took and opened it.

## The Seventh Text

Read the following passage. Then answer the literal, inferential, and personal questions about the reading.

The tree was jealous of the bird because it was born free and unrestrained. But the bird was jealous of the tree because it was fixed in the ground and deep-rooted. One day they agreed that each one would carry out the other's role.

The tree cleared its leaves and pulled out its roots, and the bird sat on the ground without any movement till it forgot to fly. The wind came and to up rooted out the bare tree. As a result, poor people came to cut the tree and burn it. On the other hand a child passed by the bird, and it was not able to escape, so he took it and put it in a cage.
(10) Literal
(1) The tree has an important role in life because:
(a) It has fixed roots.
(b) It has many uses.
(c) It has extended branches.
(11) Personal
(2) We like the bird because:
(a) It has a small size
(b) It has a light weight
(c) It is free and unrestrained
(12) Inferential
(3) The bird lost its freedom because:
(a) It was stuck to the ground
(b) It did not escape from the child
(c) It changed its role in life

Read the following story. Then answer the question by putting ( ) mark in front of the correct answer:

- Once upon a time there was a young man called (Kaser) who used to graze cattle in forests, hills and valleys. He was a strong man, with powerful muscles. Many time kaser returned back to the village with a fox, and the people of the village gathered to see that animal, which is famous for its wickedness, stretched on the ground and dead. One day, Kaser heard a howling. He knew it was a wolfs voice. He hid himself behind a rock, the waited until the wolf came near the flock. Before the wolf could attack a sheep, Kaser attacked it with his dagger. Soon, a violent fight started between them, ended by death of the wolf. Kaser came out very tired and exhausted.

He still heard a weak howling. He set off towards the voce, where he found two small wolves in a cave, not more than one week old. He knew that the wolf he had just killed was female and that it was mother of those two small ones. He put both small wolves in the saddlebag of his donkey and returned back to the village. He reared them in his house. He gave them milk, meat and bones till they became tame and lived with him. In the course of time, the human being was able to tame the wolf. It became an animal called the dog-wolf. It became very loyal to the human and began to protect his house from thieves and his cattle from their ancestor wolves.
(14) Where did Kaser put both small wolves?
(a) In the cave.
(b) In the saddlebag.
(c) In the house.
(15) What was the human being able to do in the course of time?
(a) To rear animals and cattle.
(b) To rear predator animals.
(c) To tame the wolf.

## The First Text

Read the following text then answer the question below it:
The soul is purified and cleaned up by prayer and brightened by all types of good deeds
life is built upon the prayer and prosperity
(1) What is the meaning of the poem:
(a) The prayer
(b) Good qualities
(c) Islam

## The Second Text

Read the following paragraph below. Identify the kind of reading and the main idea of the paragraph:

Reading habit is developed among us when we got trained upon it since our childhood. The reading has a big importance as it gives our minds knowledge and culture. It develops our hobbies, and gives us ability to dialogue and understanding along with self-confidence and others' respect.
(2) Circle the correct answer:

This passage is a:
(a) Description
(b) Explanation
(c) Comparison
(3) Circle the letter of the best choice:

The main idea is:
(a) Our duty towards reading
(b) Importance of reading
(c)Pupils role as to reading

## The Third Text

Read the following text. Then use the context to figure out the meaning, by putting ( ) sign before meaning of the appropriate word:

Khalid woke up with a feeling of pain in his stomach so his mother called the doctor.
After a check-up, the doctor advised him to stay in his bed and prescribed him necessary drugs. Khalid followed all of the doctor's advice and recovered his health.
(4) The word recovered means:
(a) regained
(b) complete
(c) continue
(5) The word executed means:
(a) fulfilled
(b) responded
(c) confirmed
(6) The word guidance means:
(a) marks
(b) instructions
(c) remarks

## The Fourth Text

Read the following text then answer the question below it:

- Yesterday I saw a beeYellow like the gold

Flying from a flower to another nice sweet-smelling one
Oh mother what does bees mean by this playing
Bees do not play Oh my son, but they work
Without these we wouldn't have this honey to eat
(7) What is this text about?
(a) the bees
(b) the flower
(c) the honey

## The Fifth Text

Read the following paragraph. Weave the ideas together as you read. Then read the question. Circle the answer that states a detail that is suggested by story ( )

- A woman had a hen that used to lay an egg every day. She said to herself, "How can I make my hen lay two or three eggs?" She thought then decided to give the hen more food. Instead, she got a smaller size of egg. She thought that the food was not enough and began to force her hen to eat more food till its stomach was swollen.
(8) What do you think will happen:
(a) The number of eggs increased
(b) The size of eggs increased
(c) The hen died


## The Sixth Text

(9)Look at the following four sentences. Read the sentences and think what happened first and what happened next. Number the sentences in the correct order.
$\qquad$ when he picked it out he found it empty. He cast it back and threw his net again towards the shell.
$\qquad$ While he was preparing his net to throw it into the sea, he saw a shell. He thought it was a pearl.
$\qquad$ He threw his net towards it and when he pulled it out he found a fish big enough for his

Read the following passage. Then answer the literal, inferential personal and questions about the reading.

Once upon a time there was an unjust ruler, every year he used to appoint an assistant to him. At the end of the year he throw him to dogs after making them very hungry, which eat the man. Once one of his assistants knew that he would face the same fate. So, as from the tenth month began to feed dogs till they loved him. When the fixed date came they threw the assistant to the dogs but they did not hurt him, instead they showed him love. The unjust ruler was astonished and asked his assistant about the reason, he said, "I have served you a complete year then you threw me to hungry dogs to eat me, whereas I served these dogs only two months, but they behaved as you have seen".
(10) Literal

What is the ruler represents character:
(a) He likes changing
(b) He dislike assistants
(c) He has little loyalty
(11) Inferential

Behaviour of the assistant refers to:
(a) fear
(b) good behaviour
(c) love of dogs
(12) Personal

The dogs behaviour refer to:
(a) satisfy (full stomach)
(b) Loyalty.
(c) love of the assistant

## The Eighth Text

Read the following story. Then answer the question by putting () mark in front of the correct answer:

- A fox felt very hungry. It roamed in the fields and gardens looking for a chicken to allay its hunger, but in vein. It entered into a small cave.

It thought there might be the remains of a prey, but found nothing. It sat down thinking of its bad luck. It felt a light stinging, but it moved to another part of the body. It was stretched on the ground and began to roll its body on the ground, hoping to kill what was staining it or to reduce the pain, but the stinging increased.

The fox knew that fleas were in the cave and gathered on its body. What should it do? How could it get rid of them? It forgets its hunger. It had to think of a trick to get rid of these cursed fleas. Of course, the fox is famous for plotting trick! After a while of thinking, it found this trick. It went to nearby river. It went swimming and immersed its tail in the water. The fleas came out of the tail and on the body. It began to immerse little by little and the fleas came up gradually until they were all gathered in its mouth. Then it immersed its mouth for a while. As all fleas came up to the surface of the water, it dived below it and came out, leaving the fleas behind it. It came out of the river laughing, and shaking water off its body. It felt hungry, and went looking for a prey to allay its hunger.
(13) Where did the fox roam in the story?
(a) in the village
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(14) How did the fox forget its hunger?
(a) because it found something to eat
(b) because it felt a severe stinging
(c) because it swam in the water
(15) What was the feeling of the fox when he got rid of the fleas?
(a) hunger
(b) joy
(c) thirst
2. Review answers by asking individual students to identify the hidden meaning in cach itcm. Point out the source of ambiguity. Possible answers include:

1. "Draw" refers to pulling a wagon or creating a picture.
2. Events that look threatening sometimes include surprising benefits.
3. "Put on myself" refers to wearing the wallpaper or handling it without help.
4. Skyscrapers are the tallest buildings in the city, and redwoods are the tallest trees in the forest.
5. Don't spend all your moncy; save some for unexpected problems.
6. Buckets fall out of the sky or large amounts rained all at once.
7. "Knead the dough" refers to squeezing the dough or wanting money.
8. "W'hat part?" refers to the state or the person.
9. "See a doctor" also means to visit a physician.
10. "Making something smart" can mean hurting the skin or becoming more intelligent.
11. Optional Exercise: Many students will be able to create their own examples of ambiguous and figurative language. Some may have jokes and proverbs to share with other students. Ask students to take a blank sheet of paper and fold it in half. On the outside, ask students to write an example of figurative language such as a proverb, joke, riddle, or pun. On the inside, ask them to write the hidden meaning. These examples can be collected and given to other students who can read the top sheet aloud and ask classmates to infer the hidden meaning. Alternatively, examples can be tacked to a bulletin board so that students can read them throughout the day.
12. Optional Exercise: Another way to combine reading and thinking about inferential meaning is to have students read comic strips in local newspapers to find examples of hidden meaning. Cut out comic strips from the local paper for a few days, and have teams of students read them together to find jokes that contain hidden meaning. Make sure that students identify both literal and inferential meaning and that the source of ambiguity is identified explicitly.

This lesson used the metaphor of searching for hidden meaning and applied it to interpretations of proverbs, figurative language, and jokes. The materials provided stimulating activities for recognizing linguistic ambiguity and inferential meaning.

## [ SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "W'hat is the hidden meaning?" Students should respond that it is the double meaning, the inferential meaning, the interpretation you give after understanding the literal me:aning.

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2. Ask, "Is it easy to find the hidden meaning? How do you do it?"." Students should discuss the effort required to think about the ambiguous parts of language and to figure out what the relationships mean. The discussion should also emphasize the importance of understanding the hidden meaning because it is the primary message.

Conclude the lesson by praising students for their ability to think beyond the literal meaning and to find the hidden meanings of these jokes, proverbs, and sentences. Ask them to look for other examples of hidden meaning, and to share them with the class
$\square$ INDEPENDENT EXERCISE
The activities located on pages 22-24 of the Workbook are designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

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Why is inferential comprehension important for young readers? Even' beginning readers need to be aware of the constructive aspect of comprehension. They need to evaluate the words and think about what they mean. It is important that children make inferences spontaneously and independently while they read. Research has shown that 7 to 10 year olds are capable of making many inferences, but fail to make them unless prompted explicitly. This is a critical age period in which to emphasize the importance of inferential comprehension. In this lessun, the analysis of humor and figurative language is intended to demonstrate the importance of inferential meaning to children.

The lesson can be taught as a whole class activity or in a scries of small group activitics. Different materials can be used on different occasions for teachers who want to reinforce the concepts. This lesson is especially suited for cooperative reading and writing among children.

## OBJECTIVES

1. To increase students' awareness that jokes, riddles, and proverbs depend on inferential comprehension for their meaning.
2. To help students identify and create examples of ambiguous and figurative language that have hidden meaning.

## UNDERSTANDING THE METAPHOR

The poster illustrates a child thinking about the dotble neaning of a joke, "Have your eyes ever been checked?" The answer is, "No, they have always been blue." This is humorous because the initial expectation of the reader is that the word checked refers to an examination by a physician. When children realize that the question can also refer to a checkerboard pattern on the eyes, they are amused. It is the incongruity, or unexpected twist, that makes the double meaning of jokes funny. Draw attention to the difference between the literal and inferential meaning so that children realize that language can sometimes have double neanings. The goal of comprehension is to search the sentence to find the hidden meaning. Emphasize that understanding only the literal meaning does not allow a full appreciation of the joke. If desired, use additional proverbs, riddles, and puns alongside the poster to illustrate other examples of hidden meaning.

## - DIRECT EXPLANATION

1. Direct students' attention to the poster and have one student read the joke aloud. Discuss why it is funny, and ask children to explain the double meaning of the word checked. Emphasize that many kinds of language often include hidden meaning and that it takes effort to find the ideas in jokes, riddles, and puns.
2. Provide other examples of figurative language, such as the proverb, "The early bird gets the worm." Ask someone to explain the literal meaning and the inferential meaning. Ask, "Which is the more important meaning-birds get up carly to cat or starting a job on time makes it easicr to do?" Point out that the inferential meaning is hidden but that it is the important message. Ask, "How did you know the inferential meaning? It is easy to find the hidden meaning?' Emphasize that finding the hidden meaning requires effort and the construction of ideas from the sentence.
3. Provide another example of figurative language, such as "Don't cri? over spilled milk." Ask the class to give both the literal and hidden meanings. Use enough examples to ensure that students realize the difference between the literal and the hidden meaning.
4. Use vther examples of puns or riddles to show ambiguity in language, such as:

Q: How do you make antifreeze?
A. Take away her electric blanket.

Some students may groan and some students may not understand the joke immediately, so it is important to point out the ambiguity explicitly and show how inferences provide a hidden meaning.
5. As a final demonstration, use figurative language-cxamples of similes and metaphors-to show the difference between literal and inferential meaning. Write the following sentences on the chalkboard.

- Her face was as white as a ghost.
- The sky is a gray blanket.
- He ate like a bird.

Ask students to describe the literal and hidden meaning for each of these sentences. Conclude by pointing out the rich meaning that can be hidden and the necessity to go beyond the literal meaning in order to understand what the message says.

## [ GUIDED STRATEGIC READING



1. Direct students to turn their workbooks to pages 20-21, "Find the Hidden Meaning." Each of the items on the worksheets has a literal and inferential (hidden) meaning that students should be able to identify. Ask students to read each item and to write the hidden meaning beneath it. This can be done as a group exercise or individually.
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## LESSON $3 B$ Hidden Meaning

## Understanding Ambiguity and Inferences

Find the Midelen Hearmes


## FOCUS

A primary function of inferences is to resolve ambiguous meaning in words and sentences. Another function of inferences is to fill in gaps in text by supplying missing relations. This helps to clarify the meaning of sentences in context. Finding the hidden meaning or constructing the inferential meaning is a way of elaborating ideas among sentences. The previous lesson used humorous examples and figurative language to show students the importance of inferential comprehension. In this lesson, children will search for hidden meaning in sentences and stories so that the comprehension processes are extended to other kinds of text. The sentences show students that there is hidden meaning in normal sen-tences-that extra information can be gained from thinking beyond the literal meaning. This concept is reinforced by reading a fable because fables have distinctive literal and hidden meanings. <br> OBJECTIVES}

1. To teach students to provide missing information in sentences.
2. To teach students to identify the hidden meanings or moral of a fable.

## $\square$ REVIEWING THE METAPHOR

Direct children's attention to the poster and review the dual interpretation of the joke that is illustrated. Remind students that the hidden meaning is inferential meaning and that they must make inferences in order to understand the message. They may have to search and think hard in order to infer the hidden meaning, but it is important to do so. If they do not find the hidden meaning, they really have not understood the meaning completely.

## DIRECT EXPLANATION



1. Direct students to turn their workbooks to page 25 to the worksheet entitled, "Making Inferences." There are ten sentences on this worksheet. Each one invites an inference about hidden meaning.
2. Ask a student to read the first sentence aloud, "A workman dug a hole in the ground.' Then ask, "What did he use to dig?'" Students may respond with shovel, butldozer, and so forth. Ask them avhy they think that one answer is more likely than another and use this as an opportunity to show that several different inferences are possible. You would need more information to find out which one inference or hidden meaning is correct.
3. Continue reading sentences on the worksheet and ask questions about the instruments that are implied in the first five sentences. Students should be able to identify the likely instruments in each case (e.g., shovel, matches, spoon, hammer, brush).
4. Sentences 6,7 , and 8 on the worksheet imply certain consequences. Ask students to read the sentences and make inferences about what probably happened next. (In sentence 6, Fred probably got wet, swam back to the boat, and was rescued. In sentence 7 , the house probably caught on fire. In sentence 8 , Sally couldn't ride her bicycle until the tire was repaired.)
5. Sentences 9 and 10 imply particular emotional reactions. Ask students to read the sentences and make inferences about how the characters feel.
(In sentence 9, the boy was probably frightened. In sentence 10, the sister was probably happy.)
6. Summarize the worksheet by emphasizing the following:
a. There is a need to search for hidden meaning.
b. Many possible inferences that can be made from sentences.
c. There are differences between literal and inferential meaning.
d. Richer meaning is provided by inferences.

The Fox and the Crow

Adapted by Joan Roth

A frow wole a bree puree of cheres trom a Collage winduw and fira into a tall tree woin n $A$ fox. who had seen thre happen, sadd to hunmel!. "If I am smart. I will have checse for woper: tonight "He thought kere a moment, then decked on this plan.
"Giokd atiernown, Hiss Crowa," he said "Hime really heautiful wou haik inday live never aern wour feathers of glivenme limur neek is as graceful at a swan's and true ainge are mightice than an 2t 2 wwan' and trut aingt are mightict than an
cagle's I am surr that if tuo had a vonce, owe would sing as sweetty as a mughingale "

The c.rnw, pieased with such prase. wamed to prove that she could sing. Hut as swon as whe epenced her moouth in ung. the theese fell to the ground. The clever kor enapped is up

As he trotted off. he made thingt woine to calling hack to the (row: "I may have talked much
 brams.

1. Direct students to turn their workbooks to page 26 to the story entitled, "The Fox and the Crow." This fable can be read silently or orally as a group exercise.
2. Ask the following questions after each paragraph to guide students' thinking:

- After the first paragraph ask, "What do you think the Fox planned to do?"
- After the second paragraph ask, "Why did the Fox say such nice things to Miss Crow?"
- After the third paragraph ask, "What happened?"
- At the end of the story ask,
. "How do you think the Crow
' felt now?'" .

3. Explain ty students that this is a fable-a fictitious story that has hidden meaning to it. Say, "The literal meaning is about a fox who gets a piece of cheese from a crow. But what do you think is the hidden meaning of this fable?" Encourage a discussion about the moral of the story (Don't be fooled by flattery). Students may also discuss how Miss Crow felt humiliated and foolish. Students may also infer from the sarcastic taunting of the fox that the fox was clever but not very nice. There are many inferences that can be made from this fable about the hidden meaning, the characters' intentions, the characters' feelings, and the future consequences for the crow and the fox. Encourage a discussion of many different inferences by students.

## The Riddle of the Sphinx

A lonig. long time ago there linrila nemaid
called the Sphinx. This sphins had the head of a
woman, the turily of a liom. and the winges of a big
bird. The Sphinx lived near an oid city named
Thehes. W'henever a traveler passed hy hef, she
would give him a riddice if the traveler could no
answer the riddic, the Sphinx avould eat him up
Here is the riddle of the Sphinx. "What walks
on four legs in the morning on iwu legs at nomn.
and on thrce legs in the roming ${ }^{2 \prime}$ Many peropic in
Thetes were eaten by the Sphinx because they did
not know the answer to the riddle. They were very
much afraid of the Sphinx, and they did not know
what to do.
Then one day a very ciever man came along
His name was Oedipus. As he passed hy the sphin
one day, she stopped him and atked him her riddle
"What walks on four legs in the murning, on isn
legs at noron, and un three legs in the coening?
"That is easy." said (kedput, "The answer is
man tecause man crawk on all fours when he is a
haby. He walks upright when he to grown. and he
uses a cane when he is old
That was the right answer The Sphinx hecame
so angry that she ran off into the forest, never til
be seen again Now travelers could pass in affery
The peopic of Thehes arre wi happy and graiefut
they made oredipus their king
4. Students can practice making inferences and finding the hidden meaning in the passage entitled, "The Riddle of the Sphinx," located on page 27 in their workbooks.
5. After reading the passage, discuss with students the literal meaning of the riddle. Explain that the riddle depends on drawing a connection between a clock and the life cycle. Make sure students understand that relationship when they find the hidden meaning. Have them write the hidden meaning on the lines provided on the worksheet.

In this lesson, children learned to identify missing information from sentences and to find the hidden meaning in a fable. They made many different kinds of inferences and became more aware of the importance of inferential meaning for understanding.

- SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "What are inferences, and why is it important to make them when you read?" Encourage a discussion of the critical nature of the hidden meaning for deeper comprehension.
2. Ask, "What is a fable? Why is it important to distinguish between the literal and inferential meaning in a fable?" Students should understand that a fable is a story that communicates a principle, rule, or hidden idea, which is the moral and the main idea of a fable.

## Understanding Ambiguity and Inferences



FOCUS
Throughout this module, the search for hidden meaning as essential to full comprehension has been emphasized. Students need to transfer their constructive searching to a wide range of reading materials so that inferential comprehension becomes routine. The purpose of the bridging lesson is to apply constructive, inferential thinking independently. The strategy will be reinforced if practiced in many settings with a varicty of reading tasks. Children's awareness of hidden meaning in language can also be promoted by asking them to create examples of text that contain rich, hidden meanings.

- OBJECTIVES

1. To help students foster the transfer of inferential comprehension.
2. To help students stimulate creative examples of language that differ in literal and inferential meaning.

## REVIEWING THE METAPHOR

Direct students' attention to the poster and review the interpretations of the joke illustrated. Review definitions of infer and inference.

1. Explain to students that they are going to practice searching for hidden meaning with new materials. Ask them to select an assignment from their regular curriculum such as weekly magazines, science, or social studies passages. Tell them to fill in the worksheet entitled, Hidden Meaning located on page 28 in their workbooks as they identify the hidden meaning in the passage they have selected.

2. As an additional assignment, organize students in groups of two to four and ask them to choose one of the following activities:

- create jokes, riddles, or puns
- make up poems
- write figurative sentences (that may include similes and metaphors)
- write a brief fable/story with a hidden mcaning.

This is a cooperative project, but each student should write the literal and hidden meanings on a separate sheet of paper.
3. Optional Exercise: Hidden meaning is most evident in poems, humor, and figurative language. Use newspapers, library books, or children's poetry as bridging materials. Have children identify the hidden meaning in several selections.
4. Optional Exercise: Choose a few simple nursery rhymes or Aesop's fables to read to the class. Discuss the literal and hidden meanings in these classic children's stories.

In this lesson children examined a variety of different kinds of text to find hidden meaning. Figurative language, humor, and moral messages in fables are enjoyable kinds of reading for children. Although children are familiar with them, they may not often think about their hidden meaning.

## - SPECIFIC FEEDBACK TO STUDENTS

1. Call on students to describe the hidden meaning that they have found or created. Students should read their jokes, poems, or sentences aloud. Check to see that other students understand the hidden meanings and the literal meanings that their classmates have created.
2. Ask, "How can we find the hidden meaning?" Encourage children to talk about making inferences and trying to understand the multiple meanings of text.
3. Ask, "W'hat happens if you don't find the hidden meaning?" Tell students that sometimes they can't understand or appreciate a joke or a selection if they only understand the literal meaning.
4. Praise students for creating and finding hidden meaning, and encourage them to look for hidden meaning when they read.

المعنى الخفي

الاسمم:

العنوان"
المعنى الحرفي هو:

المعنى المخفُّي هو:

وجدت المعنى الـخفي

## Evaluating the Reading Task



FOCUS
Many children simply begin to read passages without considering the task dimensions first. Readers sometimes assume that they will figure out the message as they read. However, children often get bored or confused, and stop reading in the middle of a passage. Other common problems that children experience when reading are that they do not allow enough time to read the whole passage, they choose material that is too difficult to read, or they do not know why they are reading certain passages. A consequence of this lack of foresight about the reading task is that children may simply close the book when they finish reading without evaluating their own performance. A careful analysis of both the task and themselves may help students understand what and why they are reading so that they feel good about reaching their comprehension goals.

In this module children will be taught to analyze reading tasks. Before they begin to read, they should evaluate why they are reading, how difficult the material is, how long it will take to read it, what kind of story or information is presented, and what they should know when they finish reading. Knowing about the reading task beforehand can help the child get ready to attack the passage logically. Analyzing the purpose and structure of the task also serve as good clues for studying and remembering the information later.

1. To teach students to evaluate reading tasks by asking three questions:
a. Why am I reading this? (Purpose)
b. What kind of reading is this? (Genre)
c. What is it about? (Topic)

The poster illustrates a detective examining a book for clues. The metaphor portrays the active search for clues in text and the evaluation of evidence. Students need to become aware of the analysis required for reading. The questions on the poster call attention to the vigilance required to determine:

- What kind of reading is this? - What clues can I find?

A detective always looks for clues and evidence. So do good readers. Children can be reading detectives before, during, and after reading a passage as they search for clues, evidence, and meaning.

## DIRECT EXPLANATION

1. Direct students' attention to the poster. Ask, "What do detectives do?" (Solve mysteries, help people, collect evidence, search for clues, and so forth.) Encourage children to think of examples from television shows and books. Allow them to claborate on a specific example to show how a detective analyzes the type of case and clues to figure out what is going on.
2. Ask, "How can you be like a detective as you read?" Answers may include ideas such as collecting information, asking questions, and searching for clues. Emphasize that these kinds of inspection and analyses can occur before, during, and after reading. Good detectives always search for clues.
3. Invite students to become reading detectives. Tell them that each reading task should be viewed as a new "case" to be solved. Detectives cannot be successful unless they work to find clues and then use all the clues to solve each case. Students who are reading detectives must also develop the habit of finding all clues in order to become successful readers.

Have students turn their workbooks to pages 29-30 to the worksheets entitled, "Be a Reading Detective."

4. Explain that each of the "cases" on the worksheets requires analysis. Write the guide questions on the chalkboard, or simply ask them after students read each case:

- Why am 1 reading this?

What kind of reading is this?

- What is it about?

Tell students to look at key words in the text for clues about the kind of reading it is. Each "case" describes a purpose, genre, and/or topic for a reading task. Have students discuss the cases and how to read differently for each one.
5. A critical part of the procedure is to explain why the questions help students understand as they read. As students "solve each case," point out the following:

- Knowing the purpose for reading is important because it tells the reader how much attention is required, and how to tell if he or she was successful.
- Identifying text genre (e.g., fact, fiction, narrative, poetry, directions) helps the reader understand how information is organized and what kind of meaning to search for (i.e., literal, inferential, and personal.).
- Knowing the topic before reading helps the reader think about similar information that may aid comprehension.

6. After completing the worksheets, praise students for being good detectives. Tell them that it is important to search for clues and to analyze their reading tasks.

## - GUIDED STRATEGIC READING



1. Ask students to turn their workbooks to page 31 to the passage entitled, "Making Syrup." Tell them to look at the passage briefly and to search for clues.
2. Ask the following questions about the selection:

- What is it about? (Maple syrup)
- What kind of reading is it? (Fact or list of directions)
- Why am I reading this? (To find out how to make syrup)

As students answer these questions, have them explain the clues that they used.
3. Tell students to read the passage silently and to fill in the magnifying glasses with their answers after they finish reading.

## 4. Praise students for finding

 good clues.Remind students that there are similarities between reading and being a detective. Detectives actively search for clues and organize the evidence in order to solve a case. The search for meaning while reading requires the same kind of active searching. The questions that were asked tast time help students focus on clues to the meaning. Remind them of the questions.

- Why am I reading this?
- What kind of reading is this?
- What is it about?

Explain to students that understanding these aspects of the selection as they read helps guide their understanding.

In this lesson, pupils will learn more questions to ask that are clues to the meaning. It is important that detectives ask these questions themselves as they read.

## $\square$ <br> DIRECT EXPLANATION

1. Point out to students that there are other good clues that reading detectives use. One of them is to analyze the difficulty of the text. Write this question on the board: "ls it casy or hard to read?" Ask, "How can you tell if something is difficult to read even before you read it?" Answers may include that the number of pages, paragraphs, or length of the text are clues, the difficulty of the vocabulary, or the familiarity of the topic may also provide clues. Encourage a variety of answers and explain to students that vocabulary, topic, and length are all excellent clues to passage difficulty. Tell them that these are good clues to use when examining a library book, or considering the purchase of a book, or looking at a lesson before studying it. Make sure students realize that there are many occasions in which it it important to analyze the difficulty of reading.
2. Now write this question on the board: "Do I have enough time to read it?" Ask, "Why is this an important question? What happens if you start to read, but don't have enough time to finish? How do good detectives make good reading plans?" In the discussion, emphasize that a good detective evaluates the time available for reading. Stopping in the middle means that the search for evidence is interrupted. Make sure that students realize that there is a connection between the time available, the reading goal, and the difficulty of the text. This is especially important for school tasks that have to be completed within a given amount of time.
3. Next, write this question on the board: "Did I understand it?" Ask, "Do you ever ask yourself this question when you finish reading, or do you just go on to something else?" Explain that good detectives constantly check on their own investigation. They check to see that they have good clues and that they made the right inferences from the clues. They check to see if they are getting closer to solving the case. Even when they think they have solved it, they evaluate the evidence again to make sure. Tell students that reading a passage is not enough. If they are not sure they understand it, they have to go back and analyze it further.
4. Finally, write this question on the board: "Did I like it?" Ask, "Why is it important to ask this question?" Students should offer that enjoyable subjects capture their interest and are easier to read because they command their attention. Good reading detectives like to search for clues and enjoy

SUMMARY
In this lesson, students were taught questions that can guide their thinking while reading. They learned to think about the purpose for reading, the type of text, and the topic of text as they search for meaning. In the next lesson, they will learn additional questions that can guide comprehension.

## - SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "What does a reading detective do?" Encourage answers that focus on searching for clues and evaluating evidence about text meaning.
2. Ask, "When does a detective look for clues?" Encourage answers that describe how inspection before, during, and after reading can foster comprehension.
3. Conclude by asking, "Why is it important to be a detective while reading?'" (Because you may miss clues or not solve the case if you just read the words.)

## INDEPENDENT EXERCISE

The activities located on pages 32-34 of the Workbook are designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.


## LESSON <br> $4 B$ Be a Reading Detective

## Evaluating the Reading Task

Be a Reading Detective


## FOCUS


#### Abstract

A good reading detective searches for clues to meaning. In the first lesson, students were taught that clues about the purpose, type of text, and topic can help guide reading. In this lesson, students will learn additional clues that can help guide their understanding. These questions are posed by the teacher initially, but they need to become internalized so that students ask themselves these questions before, during, and after reading. One focus of this lesson is on the additional kinds of questions that can guide comprehension. Another focus is to convince students to ask themselves these questions as they read to assess their own degree of understanding.


## - OBJECTIVES

1. To have students practice answering each of the following questions in independent reading:
a. Is this easy or hard to read? (Difficulty level)
b. Do I have enough time to read it? (Planning)
c. Did I understand it? (Comprehension)
d. Did I like it? (Satisfaction)
2. To encourage students to use the guide questions in independent reading.
solving eases. Einjoyment, satisfaction, and pride go along with solving a case and understanding what is read
3. Ask students if there are other questions that would help them understand what they read. Encourage students to think about the task, what they know about the topic, how they are going to be evaluated, and whether or not they enjoyed the task. Point out to students that they are now on the path to becoming good readers by being good reading detectives, but it is important for them to ask these kinds of questions for themselves as they search for meaning.

## GUIDED STRATEGIC READING

1. Explain to students that the purpose of reading the next selection is to provide practice in asking good questions. Encourage them to become independent detectives as they read.
2. Ask students to take a blank sheet of paper and write a list of questions that they are going to ask as they read the next selection in their workbooks. These questions should include many of the questions discussed in this module. Other relevant questions can be added. When students complete their list of questions, ask them to read them aloud and share them with other students so that they can compare the kinds of questions they will ask as they read the passage. Encourage students to focus on important questions and not a long list of every possible question.
3. Ask students to turn their workbooks to pages 35-36 to the passage entitled, "Stone Soup." Tell them to examine this story before they start to read and to answer some of the questions, if they like. Then have students read the passage silently and fill in their answers to their own questions as they read. Allow 10 to 15 minutes for this exercise.

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## GUIDED STRATEGIC READING

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| Stone Soup <br> Adapted by Joan Roth |  |
| :---: | :---: |
|  |  |

4. After students finish reading the folk tale and answering their own questions, call on students individually to answer questions. Many students will have the same questions but slightly different answers. Point out how students have evaluated evidence differently and have found different kinds of meaning in the text. Also point out the value of the different questions for identifying various kinds of clues in the passage.
5. Finally, when students evaluate their own understanding of this story, make sure they have understood the inferential meaning and moral of this folk tale (i.e., when everybody shares a little bit, the combination is enormous).

In this lesson, students were taught four additional questions to ask as clues to finding the meaning in reading. These questions concern task difficulty, time availability for reading, assessment of one's own level of understanding, and personal enjoyment. Additional questions were generated by students, and they were encouraged to internalize these questions and use them to guide their reading. Self-questioning is a powerful strategy for enhancing comprehension. The questions included in these lessons directed students to think more deeply about the reading task before, during, and after reading.

## $\square$ SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "What did you learn today?" Encourage answers that focus on the four questions as well as other questions generated by students.
2. Ask, "Why is it important to ask these questions as you read?" Encourage answers that point out the search for clues, the richer meaning obtained, and the satisfaction in being thorough and strategic.
3. Ask, "Is it better to ask a lot of questions as you read or a few central ones that fit the purpose best?" Encourage student answers that focus on asking critical questions and not a long list of possible questions. Point out that the purpose for reading, the type of reading, and their own interests and abilities help to determine which questions to ask. A thoughtful reader is like a good detective who looks for good evidence and knows what to do with it. Tell students that asking questions as they read is a powerful way to improve understanding and learning. They should try to practice it whenever they read.

## LESSON

## Evaluating the Reading Task



## FOCUS

Analyzing the reading task before reading helps to set appropriate expectations, activate background knowledge, and stimulate planning. Readers who evaluate the task goal and type of text before reading are better prepared than readers who just plunge into text. Likewise, analyses of the task during and after reading provide occasions to reflect on the meaning. The analogy between detectives and readers who search for clues and use evidence to solve problems helps make strategic reading tangible for children.

In this lesson, the focus is on independent practice with self-questioning. The purpose is to stimulate students to generate and to answer questions about the reäding task (not just questions about the content of the selection).

## $\square$ OBJECTIVE

To encourage students to foster self-questioning as an independent reading strategy.

## REVIEWING THE METAPHOR

Direct students' attention to the poster and review the analogy between good detectives and good readers. Remind students of the questions they have learned that are good clues for analyzing reading tasks:

- Why am I reading this? (Purpose)
- What kind of reading is this? (Genre)
- What is it about (Topic)

I Is this easy or hard to read? (Difficulty)

- Do I have enough time to read it? (Planning)
- Did I understand it? (Comprehension)
- Did I like it? (Satisfaction)


## PROCEDURE

1. Direct students to turn in their workbooks to page 37 to the worksheet entitled, "Magnifying Glasses." This worksheet has space on the handles of the magnifying glasses to write clue questions, and space in the glasses to write answers. Tell students that they are to make up good questions and then answer them.

2. Assign students a reading selection from content-area textbooks or from recreational reading materials. (This exercise can also be*conducted as a small group activity.) Instruct them to read the selections and fill in the workshects.
3. Optional Exercise: After students complete the assignment, check their questions and answers. (This can be done individually or as a group.) Emphasize the value of asking these questions and discuss how the questions helped students understand the task better.
4. Optional Exercise: Students can team up in pairs to practice using the questions. They can help each other to generate good questions and then fill out the worksheet together. They may also wish to read a passage together and then fill in the answers. Alternatively, one student can ask the other one different questions.

## SUMMARY

In this lesson children learned to ask themselves questions or to ask each other questions about characteristics of reading tasks. They were encouraged to be good detectives and to gather evidence about reading before, during, and after they read the selection. They should understand the value of self-questioning and how it fosters a deeper appreciation of their own thinking.

1. When students complete the assignment, provide feedback by checking the worksheets or discussing them orally with the class. For example, students can take turns describing the kinds of clue questions they asked about the selection as well as the answers they provided.
2. If students gencrate questions in pairs or small groups, ask them to describe how the questions helped to guide their thinking as they read. Emphasize that these self-generated questions helped students pause to sce if they understood what they were reading.
3. Ask, "How often should you ask yourself questions as you read?" Encourage a discussion that focuses on the selective use of questions. Students should realize that they should ask themselves some questions before, during, and after reading, but not so many that they interfere with reading the passage. The questions are clues to thinking and should be used selectively.
4. Praise the students for generating such good clue questions and encourage them to use them selectively.

## LESSON

## Tracking Down the Main Idea

## Using Clues to Find the Main Idea



FOCUS
Understanding the main idea is often a mysterious process for children who believe that comprehension follows automatically by saying the words. Sometimes readers have the mistaken notion that the main idea is simply the first or last sentence in a paragraph. In order to identify a main idea, readers need to generate and test hypotheses about the topic as they are reading. This process of predicting, confirming, checking, and hypothesizing can be practiced by students if they have a strategic orientation to the task. It is important in this process to think about the reading task before beginning to read.

In the previous module, students learned that good reading detectives analyze clues such as the title, length of the passage, and their purpose before they start to read. They have been taught to ask themselves questions before, during, and after reading. Self-questioning helps readers to concentrate on pertinent information and confirm or reject their hypotheses as they read.

One of the difficulties encountered in identifying main ideas is sifting through information and condensing the message. Some sentences are more important than others. The key to identifying important sentences is to look for relerant clues, or to ask questions that are central to the main idea. In this lesson, children will learn a variety of clues to help them identify main ideas.

1. To help students understand and identify main ideas.
2. To help students recognize clues that are helpful in identifying the main idea.
3. To teach students a schema based on setting-characters-actionsoutcomes.

## - UNDERSTANDING THE METAPHOR

The reading detective portrayed in Module 4 is used to emphasize the use of clues while searching for a main idea. In that module, the emphasis was on self-questioning about various aspects of the reading task. In this lesson, the emphasis is on more specific clues about the content of the reading. In particular, students will learn that information about who, what, where, why, and how things happened in the text are important clues to the main idea. These specific clues about the content of the passage are represented on the poster as footprints that are made by an unknown animal. The detective is searching for these clues in order to identify the animal. The concrete actions of using evidence and tracking down an elusive prey are intended to correspond with the constructive, active nature of reading and the search for main ideas. The following questions are on the poster:

- Did I ask myself questions?
- Did I use clues to find the main idea?

These general questions should be internalized by students to guide their reading. This lesson provides specific questions and clues to help them.

## DIRECT EXPLANATION

1. Ask students to define main idea. Encourage a discussion about the many aspects of a main idea and the difficulty encountered in determining the main idea. Explain that a main idea tells what the whole passage is about. It connects the little ideas into a summary. A main idea captures the theme or principle of the reading. It can also tell what happenced to whom. Emphasize that the main idea summarizes the most important information in a passage.
2. Ask students, "Why is it important to be able to find main ideas?" Answers should include statements such as:

- You know you understand the story.
- You can concentrate on the important parts.
- You can write a summary, or tell somebody about the story without having to tell them everything.
Emphasize to students that being able to identify a main idea is a good check on their own level of comprehension, a good way to study and remember information, and an excellent way to summarize it quickly.

3. Ask students, "Is it easy to find the main idea when you read?" Encourage students to share the confusion and difficulty that they sometimes experience in finding the main idea. Tell them it is not easy and requires thinking about the passage.
4. Tell students to turn their workbooks to page 38 to the story entitled, "Albert's Last Bite."


Before reading, ask students to look for clues about this story and then ask them the following questions:

- "Does the picture tell you who Albert might be? (A fish)
n "Does the title give you a clue to what happens?" (He is caught.)
- "Is the story fact or fiction?" (Fiction)
- "Is it easy or hard?" (Easy)

Point out to students that they know a lot about this story even before they read because they are good detectives. Have them read the story silently or aloud and collect more evidence about the main idea: ,
2. After eeading, refer to the poster and use the words in the footprints to guide the questions about the passage. Ask, "Where does this story take place? Who is the main character? What happened? What is the outcome? How did Albert feel?" Then ask a student to summarize the main idea. (For example, "Albert lived in an icy pond until he bit into a fisherman's worm and was caught.' ${ }^{\text {' }}$ ) Make sure that students understand that the summary captures the main idea and includes information about the setting-characters-actions-outcomes.
3. Optional Exercise: This passage provides an excellent opportunity to review some of the concepts taught in previous lessons. For example, ask students to describe the literal, inferential, and personal meaning in "Albert's Last Bite" or ask students about the hidden meaning or moral to this story (greed can lead to tragedy). Point out to students that they are learning many important strategies for increasing their understanding as they read.
4. Direct students to turn their workbooks to page 39 to the passage entitled, "The Magic Phone Booth." Have them read this passage silently and fill in each empty footprint on page 40 with information about the clue. For example, the title provides a clue about the topic of this story. At the bottom of the worksheet, students are to fill in the main idea.
5. After students complete the worksheet, discuss their answers. There should be few differences among students in identifying the clues, but there may be some differences in the way they state the main idea. Emphasize that the main ideas that students write should include information about the setting-characters-actions-outcomes in a summary form. Make sure they understand that this is a convenient way to identify the main idea of a story.

In this lesson students learned that a main idea connects the details in stories and that there are many kinds of clues that can be used to track down the main idea. Several clues were identified and it was shown that combining them forms a good summary. Readers learned that searching for a main idea is a good check on understanding because it helps readers focus on important information and provides a summary of the entire story.

## SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "What is a main idea?" Encourage students to define the main idea and talk about it as a summary of important information that is obtained from gathering evidence from important clues.
2. Ask, "What clues are there to help us track down the main idea?" Encourage students to reiterate the kinds of information that are included in the footprints in the poster. Tell them that these clues should be the basis for questions they ask themselvës as they read.
3. Conclude the lesson by praising students for gathering so many good clues and using them to track down the main ideas in the stories.

## INDEPENDENT EXERCISE

The activity located on pages 41-42 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

4. Direct students' attention to the poster and read the title "Tracking Down the Main Idea." Point out that the detective from the previous poster is now trying to track down an unknown animal. We can only see the footprints of the animal and are trying to find out what it is all about. What kinds of clues is the detective looking for in order to track down main ideas? Encourage students to read the words in the footprints and to discuss each one. Point out that each clue word can be translated into a question that students can ask while reading and that will help them find the main idea. For example:
a Who are the characters in the story?

- What is the story about?
- Where did it happen?
- Do the pictures or title give clues?
- How did it end?
- How did people feel?
- Why did certain events occur?

Make sure students understand that each of these clues can be an important piece of information in tracking down the main idea. Which clue is the most important depends upon the kind of reading it is, but a good detective gathers many clues and puts the important ones together.
5. Tell students that they will learn one way of combining clues to summarize what happens in storics. Conduct the following activity on the chalkboard.
+
Write the word SETTING and ask students, "Why is it important to know where the story takes place?" Next, write the word CHARACTERS and ask, "Why is it important to know who the main characters are?" Write ACTIONS and ask, "Why is it important to know what happened?" Finally, write OUTCOMES and ask, "Why is it important to know how things turned out?"

Make sure that students understand that this schema, setting-characters-actions-outcomes, is a way of summarizing critical information in stories. Explain that it is not a way to summarize everything they read, but it helps them when they read stories, fables, fiction, and narrative text. Point out that in the next lesson, they will learn how to track down main ideas in other kinds of text.

# Tracking Down the Main Idea 

## Using Clues to Find the Main Idea



## FOCUS

The first lesson in this module defined main ideas and provided practice in identifying the main ideas in stories. Fiction is familiar to children and includes main ideas that are easily identified by the schema setting-characters-actions-outcomes. However, other types of text also include main ideas. For example, in content area reading, students may read descriptive passages about people, places, and events. Text is arranged in expository formats where topics are embellished with details. Another kind of reading that students commonly encounter is explanation. The third type of text often found is comparison. In this lesson students will learn to identify main ideas in these types of text.

- OBJECTIVES

1. To teach students how main ideas differ in various types of text.
2. To teach students to use different clues to construct main ideas for different types of text.

## $\square$ <br> REVIEWING THE METAPHOR

The poster illustrates the footprints of a strange animal. The footprints provide clues about the animal, which represents the main idea. Readers who are good detectives are encouraged to ask themselves questions before, during, and after reading and to use relevant clues to construct main ideas. It is important for students to recognize that the clues vary with different types of text.

1. Direct students' attention to the poster and remind them that good reading detectives use clues to track down main idcas. Explain that just as no two reading tasks are alike, no two detective cases are the same. Good detectives have to collect different evidence to solve different cases. Good readers need to look for different kinds of clues depending on the kind of reading. Remind students that they already learned how to track down the main ideas in stories by looking for setting-characters-actions-outcomes. Now they are going to learn how to track down the main ideas in other kinds of text.
2. Ask students to turn their workbooks to page 43 to the worksheet entitled, "Tracking Down the Main Ideas." Point out that there are four kinds of text described on the
 workshect. Explain each explicitly. Begin with stories and describe the main ideas that are tracked down by answering who, what, where, and how kinds of questions.
3. Then introduce descriptions. Ask students, "What is a descriptive paragraph like?" Answers should include lists of features, or telling how things work, or where they are. Emphasize to students that a description is a topic with supporting details. Explain that the main idea is the important characteristic describing the topic.
4. Tell students that sometimes they read passages that explain how things work. For example, history explains why things happened in a particular way, or science passages explain how things like machines, or the human body, operate. These are explanations. The main idea of explanations is really the problem and the solution. If students summarize what that problem is and how it is solved, that is the main idea of an explanation.
5. Finally, describe for students texts that provide comparisons and contrasts. Say, "Sometimes we read about how two things are alike or different. An author compares two things to show that they are not exactly the same. The main idea is the important ways in which they are the same or different."
6. Conclude this part of the lesson by emphasizing that different clucs are important for tracking down the main idea in different kinds of passages. The main idea is not always stated in the literal meaning, and it is not always easy to find. Students have to use different clues and to search for them. Knowing the kind of reading they are doing can help them look for good clues.

## GUIDED STRATEGIC READING

1. Following the explanation of different kinds of text, complete the rest of the worksheets with students.

2. Have students read the first paragraph silently or aloud. Then ask a student to tell whether this passage is a description, explanation, story, or comparison (story). Ask what clues the student used to identify the kind of text. Then ask another student to identify the main idea from the three choices given on the worksheet. Point out that the correct answer (b) includes the setting-characters-actions-outcomes.
3. Direct students to read the second paragraph. Call on a volunteer to identify what kind of text it is (description). Then ask another student to identify the main idea (b). Emphasize that the main idea in this description happens to be identical to the first sentence. Explain that sometimes a main idea can be directly stated in a paragraph and sometimes it is only implied.
4. Ask students to read the selection about "Whales and Fish," (page 45) to identify the type of text (comparison), and to select a main idea (c). Point out to students that the main idea is hidden or inferred in this paragraph.
5. Read the last paragraph, identify the type of text (explanation), and answer the main idea question (a). Some students may think that this is a story or description. Point out that it is really an explanation of how a problem was solved.
6. Conclude this part of the lesson with a reminder that a reading detective looks for different kinds of clues when reading different kinds of text. It is important to look for clues and search for the important ones so that it is casy to track down the main idea.
7. Assign the passage entitled, "A Gardening Lesson," located on page 46 in the workbook. Have students read the passage silently and identify the clues that they used, and the main idea of the selection.

8. When students have completed the assignment (pages 46-47), discuss as a group the answers they have provided for each cluc and main idea.

In this lesson children learned about four different kinds of text and how to construct main ideas for each of them. They became more aware of text genre and the different clues associated with each type, and they practiced identifying the main idea in different types of text.

## - SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "Can anyone explain the difference between a story, an explanation, a description, and a comparison?" Encourage a discussion of the differences among text genres.
2. Ask students, "What kinds of clues are useful in tracking down the main ideas in different kinds of text?"
3. Ask, "Why is it important to track down the main idea for each of these kinds of text? Do you think it is easier to find the main idea in one kind or another?" Encourage a discussion of the relative ease in identifying main ideas in different texts.
4. Praise students for using a variety of clues to track down the main ideas. Encourage them to be good reading detectives on other tasks.

## INDEPENDENT EXERCISE

The activity located on page 48 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

## LESSON <br> 5 C <br> Tracking Down the Main Idea

## Using Clues to Find the Main Idea



Did I ask myself questions?
Did I use clues to find the main idea?

Main ideas are elusive for many readers. They are difficult to define and identify. In this module, students learned that main ideas vary in different types of text. They were taught to use clues to track down the main ideas in stories, descriptions, explanations, and comparisons. The critical reading strategy is to search for good clues that help identify the main ideas. Increasing students' awareness about what they are looking for (main ideas) and how to use information (clues) is the focus of the teacher's explanation. This lesson will show how the search for clues and main ideas helps any kind of reading.

- OBJECTIVE

To help students identify clues and main ideas independently.

## REVIEWING THE METAPHOR

Remind students that good reading detectives analyze the task and search for main ideas. Point out that each footprint on the poster represents a clue to the meaning. It is important to know that some clues are better than others for different kinds of reading. The hard part about tracking down main ideas is to find clues that fit particular "cases."

1. Explain to students that detectives must learn to find their own clues just like good readers have to search for meaning on their own. Then, direct students to turn their workbooks to pages 49-50 to the worksheets of empty footprints.

2. Assign each student two different kinds of text to read, such as a science passage and a fictitious passage. Use readings that contain several paragraphs, pictures, and distinctive clues, if possible. Have students identify clues that lead to the main idea on the workshect. There are two identical worksheets.
3. When students complete the assignment, review their worksheets. This can be done with the entire class, even if students read different selections. Call on volunteers to describe the kind of text they read, the clues they tused, and the main idea. Encourage a discussion of the use of the reading strategy-i.e., the ease and effectiveness of searching for clues.
4. Optional Exercise: Perhaps one of the worksheets can be completed by students working in pairs or small groups. Beginning readers may finish this task more readily if they receive help from other students. Joint reading and answering can reinforce the strategy of constructing main ideas.

## SUMMARY

This lesson provided students with opportunities to apply new knowledge about main ideas and to'search for meaning independently. Practice on diverse text types was provided to promote transfer. Students were taught to discuss explicitly the benefits of searching for clues.

## $\square$ SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "Now that we have practiced searching for main ideas, is it easier to find good clues?" Encourage students to discuss their views of the strategy.
2. Ask, "When is the strategy of tracking down the main idea most helpful?' Encourage students to identify comprehension goals that are facilitated by finding main ideas, such as studying, summarizing, or telling someone else about the passage.
3. Conclude by praising students for their effort and good searches. Encourage them to look for clues and main ideas when they read.

# Building Bridges to Meaning 

## Using Context and Prior Knowledge

Building Bridges to Meaning


What do I know about this topic?
mid I connect new and old ideas?

FOCUS
A fundamental aspect of reading is to relate information in text to the knowledge that one already has. The prior knowledge that readers bring to tasks influences their understanding enormously. For example, if readers are familiar with the topic, they will relate information in text to personal experience spontaneously. They can also elaborate on the ideas in text according to other things they know. Thus, comprehension is facilitated greatly by activating relevant background knowledge and integrating this information with the ideas presented in text. Thinking about the topic before reading helps to activate relevant knowledge and to generate appropriate expectations about information in the text. Reading can then confirm or reject these ideas. This is a powerful way of making new information more understandable.

Relating prior knowledge to new information in text is usually referred to as using context. But using context is often a mysterious process for teachers and students alike because context can refer to information from many different sources (e.g., title, picture, content). In this lesson, children will learn two ways in which to use context. First, they will be taught to think about the title before reading and to relate new information to what they already know. Second, they will be taught to fill in missing words in text by using the context of the surrounding sentences. Using, prior knowledge and ongoing sentence information in text are powerful strategies to foster comprehension.

1. To teach students the importance of context by having them think about the topic before reading.
2. To teach students to identify unknown words by using the surrounding context.
$\square$ UNDERSTANDING THE METAPHOR
Using context is a difficult concept to convey to students. In this module the use of bridges to illustrate the connections between background knowledge and new ideas is presented. It is the readers' job to build a bridge from what they know to what they are reading. The following questions are located on the poster and are intended to be internalized by children as they learn:

- What do I know about this topic?
- Did I connect new and old.ideas?

Use the metaphor of bridges to islands to spin off related terms such as "charting new territory," "connecting isolated places," or "getting from place to place faster." It is important that students realize that the value of using context is to integrate what they read with what they know so that the information will make sense and b'e easy to remèmber.

## $\square$ DIRECT EXPLANATION

1. Direct students' attention to the poster and ask, "How can reading be like building bridges?" Encourage a discussion that focuses on connecting ideas. Explain that students can learn better when they build bridges between what they know already and new information that they read.
2. Ask a student to read the first question on the poster, "What do I know about this topic?" Ask, "Why is it important to think about what you know already before you start to read?" Students should mention that it tells them what to expect and helps them think about related ideas. Be sure to emphasize the value of thinking about relevant ideas and forming appropriate expectations for what they are about to read. Then ask a student to read the second question on the poster, "Did I connect new and old ideas?" and tell them that they should try to build bridges across ideas as they read.
3. Say, "Let's practice building bridges to meaning by reading a selection in our workbooks." Have students turn to page 51 in their workbooks to the selection entitled "Bongos in Africa."


Point out that this text has three boxes in which students can write their answers to the questions they will be asked. Call on a student to read the title, and ask, "What do you already know about this topic?" Students should fill in the first box with some ideas that they have about the topic. When they are finished, discuss their answers. Many students will focus on drums instead of animals. Point out that there are different hypotheses that readers can make about the topic and that students will have to read the passage in order to find out which ideas are correct.
4. Call on a student to read the first paragraph aloud, and then ask all students, "Now, what do you think this passage is about?" Ask them to write their answers in the second box. Students may still be confused, because the paragraph never says that bongos are animals.
5. Call on a student to read the second paragraph, and then ask, "Did you connect new and old ideas?" Ask them to write in the third box in their workbooks what this passage is about (a description of a kind of animal that lives in Africa).
6. Point out to students that this title was confusing because the reader didn't know if the topic was animals or drums. The first paragraph was difficult to understand because students didn't know what the passage was about. Direct students to look at the second paragraph and ask them if the passage would be eãsier to understand if it was the first paragraph. They should all agree that it would be because it explicitly describes the topic. Tell students that the clues to the topic can be in the title, in their prior knowledge, and in the sentences they read. They need to build bridges from what they know to these new ideas in order to understand them.

## G GUIDED STRATEGIC READING

1. Direct students to turn to the next page (page 52) in their workbooks. Point out that the passage has a blank spot in place of the title and that periodically throughout the passage there are missing words. (Three choices appear in each slot.) Tell students that the purpose of this worksheet is to help them build bridges to meaning. Say, "We are going to read this selection and connect what we know already with the missing bits of information."
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At eveh I. . I circle the wore that his
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    The:
    You take off the cap If wou Isquerere. paste.
    think | (1, h hard. stu will have a Ihcadache, mess,
    (avity) There are many wals of doing it, wis some
    people |rio, pump, sil I up and down some hack
    and forth in in circles. Sometimes the flowel
    wind, lawel is the arong hom must grt rid of
    the fwhice, foam, money \| Vou may want in
    |wipe, thower, ninel with water, Some people
    use the if hand whic mhers u*e a loup, tule.
    fiork 1. The hrush sturuld alwe be Ifaintrd, sleanest.
    capped | Don't forget to replace the liop, wen.
    fork | Vour mosuth will feel really fresh.
    | At ench I . I Inele ite wore that mis. |
| :---: |
| You take off the cap If wou Isquerere paste. think I hen hard. soh will have a fheadache, mese, (avity) There are many wals of doing it, wame people Iso, fump, sit I up and down some hack and forth or in circles. Sometimes the flowel. wind iawe I is tom arong liom must grt rid of the \{whice. foam, monefy Vou may want in \|wipe, stururt, rinel| with water some people wee theif Hands while mherv uxe a | cup, tuhe. fiork 1. The hrush sturuld alur be Ipanied, sleaned. capped I Dant forget to replace the liop, wen. fork) Your nusuth will feel really fresh. |

2. Say, "We don't know what this passage is about because it doesn't have a titlc. So, we are going to have to start reading in order to identify the topic." Tell students that as soon as they think they know what the topic is, they should raise their hands. Ask a student to begin reading the passage aloud. Whenever a blank is encountered, have students select one of the three alternatives that fits the meaning of the cntirc passage. Point out to students that sometimes a word makes sense in the sentence, but it doesn't make sense in the whole passage.
3. After reading a few sentences, students should be able to identify the topic as a description of brushing teeth. Have them fill in the blank space for the title as soon as they correctly identify the topic. Now point out how this helps them to build bridges to the meaning and to fill in the blank spaces.
4. Have students continue reading the passage aloud, stopping at each missing word to select the correct alternative. Point out why the other two choices are not correct. Explain that they don't make sense because they don't fit the context of the entire passage.

5. Direct students to the next page in their workbooks (page 53) that includes another passage with a missing title and missing words. Tell students to read this passage silently and to circle the word that best fits in each sentence.
6. When students complete the worksheet, review their answers and praise them for correctly building bridges. Correct any errors and point out why the incorrect selection does not fit the context.

In this lesson, students learned that they should connect their prior knowledge about a topic to the information they are reading. The importance of a title was demonstrated with an ambiguous title and a missing title. Students were taught that a title provides clues to the topic and that thinking about the topic helps them to understand the information that they read. They practiced building bridges by filling in missing words that were consistent with the sentence and the passage context.

## SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "How can you build bridges to meaning as you read?" Encourage students to talk about relating prior knowledge to new information and thinking about the topic before reading. Remind them that the title and topic provide good clues about the main idea of the passage.
2. Ask, "Why is it important to build bridges as you read?" Encourage a discussion among students about the value of connecting what they read to what they know. Emphasize that it makes sense because it is familiar and because they can add their own idcas. Bridges are personal connections that require effort.
3. Praise students for building such good bridges to meaning and encourage them to connect what they already 'know to the new ideas that they read.

## INDEPENDENT EXERCISE

The activity located on pages 54-55 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.


# Lesson Building Bridges to Meaning 

## Using Context and Prior Knowledge



## FOCUS

Many children begin to read without thinking about the topic of the passage beforehand. They do not capitalize on the context provided by the title or pictures, nor do they think about what they know already that may aid their comprehension. Prereading activities that activate background knowledge orient students to the topic and make it meaningful. In this lesson, students are shown how prereading discussions can facilitate subsequent reading. Using context while reading also means integrating the information from different pararaphs in text. Children have a great deal of difficulty relating information from different parts of text. The greater the separation of ideas, the harder it is to integrate them. Thus, students need to practice relating the main ideas of different paragraphs. An important part of reading is the progressive refinements of the entire text. Only by building bridges as they read can students grasp the evolving and integrated meaning of the entire selection. This lesson also provides opportunities for students to integrate ideas across texts.

1. To teach students the value of discussing the topic before reading.
2. To teach students to connect ideas from different paragraphs within text.

## REVIEWING THE METAPHOR

The poster illustrates a bridge between prior knowledge and new ideas. It is important that children understand the notion of bridging new ideas to prior knowledge, but they also need to have instruction on how to build the bridges. In this lesson, the focus is on the effort required to build bridges and the kinds of things students can do in order to bridge ideas. Constructing ideas, building small bridges and then larger bridges, and constructing multiple bridges are all good examples of the metaphor of building bridges.

## DIRECT EXPLANATION

1. Direct students' attention to the poster and ask, "What are bridges to meaning?' Encourage a discussion of the connection between new and old ideas. Then ask, "Is it easy to build bridges? Do you build just one bridge? Can you build a good bridge the first time you try?'' Encourage students to respond that building bridges is diffucult. It may take many attempts to make a good bridge.
2. Then ask, "When do you build bridges?" Encourage students to respond that bridges can be built before beginning to read, after reading a title, after reading paragraphs, and even after the end of the whole passage. Building bridges is really a way of thinking ahead and looking back as they read to make sure that the ideas that they are reading about fit the knowledge that they already have.
3. Direct students to turn their workbooks to the passage entitled, "The Amazing Starfish (page 56)."

## The Amazing Starfish

Starfish are strange-lionkink animals. They are haped like a star with five logs. I'noter carh leg are tiny suction cups. These grip the sea noor as the fish moves over rock and and. sometimes hig waves can wash starfish ashore. A starfish on the beach is a common sight.
flut the slarfish is a very uncommon fish, it can in some amazing thines that people would tike in understand. For example, if a starfish loses one of understand. For example, if a starfish loses ome its legs and there is one piece left, it can grow five new legs. It does not matter how small the piece is that is left. Scientists wnuid like to know how starfish do this.

The starfish has another trick. It can open a damsheil without a knik. It syucezes and syweezes the shell until the ciam opens if a small crack That alial wach insids and enient a sayy atam vpecial
dinner.

Some peopie think if you turn a sarfish on it hack, it will stay that way. This is not so. The sarfish will right itself again. It will turn one of it: legs completely over wotil it can grip the ground. Then it will fold itself in half so two more leges can grip the ground. Flip - the starfish does a somersauls. Isn't that amazing?

Encourage a brief discussion about starfish among students. Ask, "Have you ever seen a starfish? Have you ever been to the beach and found them on the sand? What do they look like? Are they really fish? Do you find them in fresh water or just salt water? What colors are they? What do they feel like?' Students should share their knowledge and personal experiences. Point out that understanding the topic along with what they know already will help them read the passage.
4. Have students read the passage and stop after each paragraph to identify the new ideas. Relate these new ideas to the discussion that students had so they see how new ideas are connected to their prior knowledge. When students have finished reading the passage, ask them to relate the main ideas of each paragraph.

In this lesson, children learned the importance of discussing and thinking about the topic before reading. They were taught that activating background knowledge is an important type of context and that they should bridge their knowledge of the topic to what they read. Students also learned that ideas within text can be bridges together and integrated so that new information can be gained. The expository passages about starfish and rainbows show how bridging ideas can help readers learn new information.

## $\square$ SPECIFIC FEEDBACK TO STUDENTS

1. Ask, "Why is it important to discuss what you know about a topic before reading?' Encourage a discussion that emphasizes the value of relating prior knowledge to new information in text.
2. Ask, "Why is it important to build bridges across paragraphs in text?" Encourage a discussion that focuses on relating new and old ideas in text so that each idea is connected to other ideas. Emphasize the value of integrating ideas so that they are consolidated.
3. Praise students for understanding the importance of building bridges to meaning and encourage them to spend the extra time building bridges before, during, and after reading.

- INDEPENDENT EXERCISE

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Fend the passege. Prectice bulliling bridges to meanin
by snswering the questions that follow.
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## Constructing a Building

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liave you ever scen a skyseraper and wondered huw it was buill' The construction of these office or apartment buildings is a long process. It requires the work of many people with different taients and akilis.
People with special jobs pian the size and type of tuiidings. Architects draw pictures to show the location of every room, dow, window, and slairway. Engincers will plan the type of heating and plumbing. They also decide where and when steel or concrete will be used.
The real work of huilding is the job of the construcion workers. They dig the foundation. They build the sturdy frame. Cranes are nerded io withe larke werat together. The building is formed story by stors-
Next begins the joh of making the inside roums. Each one will need heat and light. The walts must be plastered and ceilings made.
When painters and decorators finish their work. people can move into the new huilding.
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What is the lopiceof the lexi?
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What is the lopiceof the lexi?
What do I diready know?
Whal new ideas have I learned?

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The activity located on page 59 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have students apply what they have learned.
5. Optional Exercise: This is a good place to review main ideas and text genre. Students should be able to identify this as a description of how starfish move, grow, and eat.
6. Conclude this lesson by pointing out the value of discussing the topic beforehand to establish bridges from old ideas to new ideas.

\section*{GUIDED STRATEGIC READING}
1. Direct students to turn their workbooks to pages 57-58 to the passage entitled, "How Are Rainbows Made?" and the worksheet entitled, "Bridges to Meaning." Tcll students that they are going to practice building bridges to meaning. They should identify the topic of the text and think about what they know already before they start to read. Then they should try to connect their new and old ideas.

2. Direct students to read the passage and fill in the worksheet on their own.
3. When students have completed the assignment, review their answers. The topic of the text should be identified as science, rainbows, prisms, sunlight, or a description. Praise students for mentioning a variety of topics in addition to rainbows.
4. Ask students to share their responses to the other bridges, "What I know already" and "New ideas that I learned." Point out the connections between background knowledge and new ideas.
5. Ask students for a definition of prism. If they are not sure, ask them if they can figure it out from the context of the sentence and the passage. Point out how the context is a bridge to what the word means.

\section*{Weaving Ideas While Reading}

\section*{Elaborating on Text Information}

Weaving Ideas While Reading


FOCUS
In order to construct meaning, reading has to go beyond the information in the sentences. Readers need to combine ideas in text with their own ideas. They have to draw inferences and connect new and old ideas. These aspects of constructive comprehension have been emphasized in previous lessons on inferential comprehension and bridges to meaning. In this lesson, children will learn how to integrate information from different sentences. Sometimes students spend so much effort decoding and remembering each sentence that there is little energy left to integrate them. In this lesson children will understand how to weave ideas together and why it is important to do so. They will learn that meaning is constructed and interwoven in readers' minds as new ideas are formed and that sentences often provide information that lead to particular inferences. Together, sentences and ideas help readers draw conclusions, make inferences, or find main ideas.
1. To show students how to make hypotheses about relations among sentences.
2. To have students illustrate confirmation of these hypotheses by weaving ideas together to draw appropriate inferences.

\section*{UNDERSTANDING THE METAPHOR}

The poster illustrates a person working at a loom to weave ideas. The person working at the loom illustrates how various hypotheses are generated and woven into one's understanding. Reading is like weaving each successive idea into the fabric of what you understand. As more and more ideas are interwoven, the pattern becomes clear and the fabric becomes finished. The metaphor illustrates that ideas are not separate but connected. When they are all woven together, the result is a beautiful rug or fabric that has a distinct pattern on it.

\section*{DIRECT EXPLANATION}
1. Direct students' attention to the poster and ask, "How is reading like weaving ideas together?" Point out to students that there are many ideas in text and in their minds that they connect as they read. Putting them all together makes a picture or pattern. It is important that children understand that ideas come from their own minds as well as the text. These ideas must be combined in order to comprehend what is read.
2. Say, "We are going to see how ideas can be woven tugether." Have students turn to page 61 in their workbooks to the selection entitled "Weaving Ideas While Reading."


Ask a student to read the first two senterices of the exercise:
"It was Monday morning, John decided to ride to school." Then ask, "How do you think John got to school?' Encourage children to generate a variety of answers including such standards as bus, bicycle, and car, as well as wild hypotheses such as skateboard, hot air balloon, or dog sled.
3. Then ask, "Why do you think some of these ways are more likely than others? Can you tell from the story? Have students point out that it doesn't say how John rode to school. Encourage students to read on and weave the remaining sentences into ideas. Ask a student to read the next sentence, "He put his books in the basket." Ask, "Does that give you a clue?"
Point out to students that some hypotheses are still possible, but others may not be. Ask them to name the hypotheses that are still possible.
4. Have another volunteer read the next sentence, "His feet went 'round and 'round." Ask, "Do we have another idea that we can weave? Now how do you think John got to school?"
5. Next, have a student read the last sentence, and ask, "Does the story ever say how John rode to school? No, it doesn't, but what is the most
likely conclusion?" Point out to students that the two sentences provide converging evidence or "good clues" about how John got to school. Explain that when readers weave their ideas about how John could have ridden to school together with the ideas in the sentences, they are nearly positive that John rode his bicycle to school.
6. To illustrate how different ideas can lead to different conclusions, tell students to read the first two sentences of the exercisc again. Then say these two sentences, "He waited at the corner. He gave his money to the driver." Then read the last sentence of the exercise and ask, "Now, how do you think John rode to school?". Because they have woven different ideas together, help students conclude that John probably rode a bus or cab. Point out that these different inferences follow from the different clues woven into the story even when other parts are unchanged.
7. Ask, "What does this story show?" Encourage answers that illustrate the following ideas:
- Not everything is stated explicitly.
- Sometimes you have to guess what happens.
- Combining ideas from different sentences help you make inferences.
- Sometimes you can think about what happens and then read to see if you are right.
- Even when the story doesn't say something exactly, if you weave ideas, you can guess what probably happened. ?
8. Encourage students to generate ideas and elaborate on the meaning of the sentences as they read so that they can predict what happens next and draw inferences. Ask, "How can we weave ideas while reading?'" Encourage students to respond that pausing, paraphrasing, predicting, and elaborating on the text help to weave ideas.
9. Ask, "Why is it important to weave ideas?" Point out to students that the ideas aren't always stated in the sentences and they have to weave the ideas together with what they know in order to understand the story.
10. Optional Exercise: Another way to illustrate the metaphor of weaving ideas is to cut out sentence strips from a story and weave them together in a poster. Take a large piece of paper and draw a picture of a person reading. Cut vertical slits in the poster so that the sentence strips can be woven into the poster. Each sentence can be presented individually and then woven into the story. Ask students to generate hypotheses and confirm or reject them with each successive sentence. Emphasize the interweaving of ideas while reading.

\section*{GUIDED STRATEGIC READING}
1. Tell students to turn their workbooks to page 62 to the passage entitled, "The Big Race." Say, "This story has some sentences in the beginning and one at the end, but the middle ones are missing. Different sentences can be woven into the middle to create two different kinds of stories."

\section*{The Big Race}

Ed and Mike were best friends. They did not argue very offien. In fact, they went to school ingether almost every day: One day they argued about who was the batest. They decided to rac each other to find out.

Now try to complete this atory. Select tout semences trom the hat below that fit tepather in this atory. Then write esech sentencs in the proper ordet.

Ed kicked his feet as fast as he could.
2. Mike's tires screeched when he put on the brakes.
The water felt cold on his skin
. Mike turned on the engine.
5. There was a hig splath when F.d staned
6. His fingers gripped the wheel tightly.
7. They stared at each other as they took their marks.
8. The sun was shining hrightly.
9. Ed wanted to win very much
10. Some of their friends were cheering for them

2. Have students read the selection and the sentences silently and allow time for them to identify sentences that can be woven into the story. There are three kinds of sentences: numbers 4,6 , and 2 lead to the conclusion that it was a car race. Sentences 5, 3, and 1 lead to the conclusion that it was a swimming race. Sentences 7, 8, 9, and 10 are neutral and can be fitted into either version in almost any order.
3. Discuss students' answers and point out that the ideas that are woven into the middle of the story can lead to the conclusion that it was either a car race or a swimming race. Explain that some sentences don't tell you what kind of race it is. They make sense with either version. Point out to students that none of the clues alone tells what kind of race it is, but the three clues together make it highly likely that the boys were either swimming or driving cars. Emphasize that readers have to weave all the ideas together to really understand the story.
4. Direct students to turn their workbooks to the next page (page 63) to the stories "Birthday Party" and "Halloween Night."

Have them read these selections silently and answer the questions that follow each story. Remind students that they will have to weave ideas together in order to answer the questions.
5. After students read the selections and answer the questions, review their answers. The third question for each selection requires inferences based on converging clues in the passages. Make sure that students realize that the answers aren't stated directly in the passages, but it is likely that Sue's father gave her a parrot for a birthday present, and likely that Trudy put on a witch costume for Halloween.
5. Conclude this part of the Iesson by reminding students that they have to think of ideas that fit the text and weave them with other ideas so that they are all sensible. Thinking of ideas and testing them are important for weaving meaning together.

\section*{\(\square\) GUIDED STRATEGIC READING}
1. Direct students to turn their workbooks to pages \(68-70\) to the selections entitled, "The Great Fire" and "Chicago Grows Bigger."

2. This exercise can be conducted with a whole groúp or in small groups. Have students read the passage and fill in their ideas in the blank spaces. The class can discuss their answers as a whole or in small groups. However, they should read and weave in their own ideas independently. Discussing appropriate ideas among students is a key feaure of this exercise. Cooperative brainstorming is a model of thinking and weaving ideas.
3. Allow students at least 20 minutes to complete this exercise and then discuss their reactions to it. Ask, "What ideas did you weave into the story? How many of you had similar ideas? Point out that many good ideas can be woven into the text and students don't always have to have the same ideas.

In this lesson students read content area material that was interrupted with blank spaces. They had opportunities to generate hypotheses and predictions and to weave their own ideas into the text. Elaborating on the ideas, making inferences, and connecting knowledge with text information were taught as important aspects of hỵpothesis testing while reading.

\section*{Elaborating On Text Information}


\section*{FOCUS}

Reading comprehension is facilitated when readers bring their own experiences to bear on the topic. This has been shown previously by discussing the title and topic before reading, but it is also important to bring knowledge to bear while you are reading. Hypothesis testing and elaborating on text is an ongoing part of comprehending. In this lesson, children fill in their own ideas in various parts of the text. In this manner, they can see how to weave appropriate ideas of their own into the text. In this lesson, students will generate ideas and evaluate whether they are appropriate to the rest of the passage. Thus, they will practice both hypothesis generation and hypothesis testing of their own ideas as they weave them into the text.OBJECTIVES
1. To show students that they can weave their own ideas into content area reading.
2. Tc provide students with practice in evaluating how their ideas fit the text.

Direct students' attention to the poster and ask, "How is reading like weaving ideas?" Emphasize that comprehension involves relating ideas from their own experiences to the ideas in text. There are many ideas that have to be combined so that they are not isolated and forgotten.

\section*{DIRECT EXPLANATION}
1. Begin this lesson by pointing to the poster and asking, "Where are the ideas woven together? On the page? In the book?' Explain to students that ideas are woven in their minds as they read.
2. Ask, "How do you weave idcas? For example, if you were going to read a story about zoos, how would you weave your own ideas about the topic into the meaning? What kind of information would you expect to find in the passage?' Encourage students' responses that mention topics such as kinds of animals, what they eat, rare animals, special houses or cages, how many people visit the zoo, who pays for the zoos, how people are trained to be zookecpers, why we need zoos, and so on. Tell students that thinking about the topic helps to generate ideas that can be woven into the reading.
3. Then say, "You also need to weave ideas as you read. You have to stop and generate ideas and test them to see if.they fit." Tell the class that they will now have a chance to practice weaving their own-ideas into a science lesson. Ask them to turn their workbooks to page 67 to the passage entitled, "All About Roots."
\begin{tabular}{|c|}
\hline All About Roots \\
\hline The ronts of most plants are under the ground. \\
\hline Some routs grow siraight and deep. A carrot plant has a root like that. \\
\hline Roots hoid a piant in the soil. They keep the plant from falling down of hhowing away: \\
\hline Roots aiso make air spaces in the soil. Rain water soaks into the spaces \\
\hline \begin{tabular}{l}
- Cirast riwits spread out \\
- Rexis take in water and minerals for the plant to use. \\
- Reots can hold the sail like a net. \\
- The ranss of hig irees krow down deep and spread out. \\
- Some rixht are very striong.
\end{tabular} \\
\hline
\end{tabular}

Explain to students that this is a science passage, but parts of the passage have been removed and it is up to them to fill in the missing ideas. Ask them to think about the topic before they read and to write in some of their own ideas in the blank spaces. Then have students read the sentences, write some of their ideas, read some more, and then write some more ideas-so they are weaving their ideas into the ideas in the passage. Direct their attention to the sentences at the bottom of the page and say, "Here are some sentences that may help you because they fit 'into parts of the passage. You can weave these sentences into the passage with your own ideas, if you would like."
4. After students complete their worksheets, review the ideas that they generated and sentences that they selected to weave into the text. Correct errors and point out why some ideas and sentences don't fit as well as others.

In this lesson students learned that they should make inferences, generate hypotheses, and weave clues together in order to know what happens in stories.
- SPECIFIC FEEDBACK TO STUDENTS
1. Ask, "Where did the ideas come from that you wove while reading? Students should respond that ideas come from sentences and from their own experiences. They should weave them together.
2. Ask, "How do you weave ideas?" Emphasize that students have to stop and think about the sentence meaning and what they already know about the topic. They have to guess and predict and elaborate on what the sentences mean. Hypothesis generation and testing are critical, and students should realize that these are part of reading.
3. Praise students for weaving the ideas together and drawing the right conclusions. Tell them that they should weave their ideas together as they read.

\section*{INDEPENDENT EXERCISE}

The activities located on pages 64-66 of the Workbook are designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

1. Ask, "Did it help you understand the story better when you tried to weave in your own ideas?" Encourage a discussion that focuses on the benefits of connecting prior knowledge with the text. Also emphasize the value of periodically stopping to think in more detail about the text.
2. Ask, "Is it easy or hard to weave your ideas into the text? Encourage students to say that it is difficult for them to think about what the text says and what they know and fit it all together. Tell students that it is not easy to do, but it is important in order to understand the meaning of the passage.
3. Praise students for the variety of answers and their efforts at weaving ideas. Tell them it will become easier with practice and they should try to do it often.

\section*{LESSON}


\section*{FOCUS}

\section*{- OBJECTIVES}

Throughout this module children have learned that reading involves adding their own ideas to text information. Thinking about the topic before reading, gencrating hypotheses and predictions, and adding new ideas to text help to develop the meaning. These processes make the text personally meaningful. They also demonstrate the similarity between reading and writing because hotb involve thinking and combining ideas. In this lesson, this connection is reinforeed by asking students to write their own ideas that fit into independent reading material. As they create new ideas that fit the text, they will Iearn to generate and test plausible hypotheses. Students also will learn that text can be modified to include their own ideas. This will increase their awareness of the importance of combining their ideas with the text information.
1. To increase students' awareness of the importance of adding personal ideas to text meaning.
2. To help students use hypothesis testing while reading and writing.REVIEWING THE METAPHOR
Remind students that good readers weave ideas together as they read. The ideas come from different sentences in the text and also from the readers' own knowledge and experiences. The full meaning of text must be woven into the reader's mind while reading. Whether reading or writing,
the process is similar. Ideas are produced and tested to see if they fit the text. This helps to elaborate on the text information so that it is meaningful and easily remembered.
1. Select a passage from students' content area reading assignments that can be elaborated on easily with students' own ideas. This works best if the topic is familiar. Recreational reading material such as magazines or stories can also be uscd.
2. Tell students that they are going to practice weaving their own ideas into text by writing new sentences. They should read the sclection and add five of their own sentences to it. The sentences can be added anywhereeven in five different places-but they have to fit the selection and add good ideas. Remind students to check their new ideas by rereading the selection with the nerv and old ideas woven together.
3. Direct students to turn their
 workbooks to page 71 to the workshect entitled "Weaving Ideas." Explain that they can write their five new ideas on the worksheet and just put a dot or number in the selection where each new sentence belongs.
4. Optional Exercise: This lesson can also be presented as "editing." Tell students that the selections need to be changed to add more information. They should act as editors to make the selection more understandable by adding five new ideas.
5. Conclude the lesson by revicwing students' new ideas. Talk about how the new ideas fit the text and expand the meaning in important ways.

\section*{SUMMARY}

In this lesson, students practiced adding their own ideas to text. They learned to generate and combine ideas that made text understandable and personal. The transfer of these strategies to new tasks and independent practice were taught as ways of increasing students' awareness of the benefits of elaborating text ideas.

\section*{\(\square\) SPECIFIC FEEDBACK TO STUDENTS}
1. Ask, "Was it easy or hard to weave in your own ideas?" Emphasize that it takes effort, careful thinking, and rechecking.
2. Ask, "How are rcading and writing alike?" Emphasize that you have to think about how ideas are connected when you read or write.
3. Tell students that they should weave ideas into text when they read so that they understand it better. Encourage them to practice weaving their ideas before, during, and after reading.

\section*{Understanding Temporal and Causal Sequences}


\section*{FOCUS}

In order to understand meaning in passages, readers need to connect important pieces of information. Many of these connections involve sequences of action or events. Sequences of actions may be formed by the connection of the events in time, or by cause-and-effect relations between events. Thus, an important part of the readers' task is to remember and relate information from various sentences in the right order to reconstruct temporal and causal sequences. This is especially difficult for children to do because they must remember several pieces of information and then organize them in order. The further the events are separated in text, the more difficult it is for children to notice the temporal and causal relations as they read. In this lesson, children are taught to identify the temporal order of events. They learn to identify beginnings and endings of passages and to make the links for the right sequence of events.
1. To teach students to identify the beginnings, actions, and outcomes in stories.
2. To teach students how clue words help to identify the temporal order of events.

The poster illustrates four links in a chain labeled beginning, clue words, actions, outcome. Each of these will be defined in the lessons and the children will practice identifying them. Emphasize to students that the order of events is important because it tells what happened first and last. Sometimes clue words can tell the order of events, and so readers should pay particular attention to them. If desired, add additional links in the chain of events (e.g., characters, feelings), or make construction paper chains to accompany the poster. The three questions on the poster are guides for students' reading and should be internalized by them with practice.
- What happened first and last?
- What are good cluc words?
- Did I connect causes and outcomes?

The important feature of this metaphor is the emphasis on connecting ideas in order. The links in the chain fit together in a particular way just like ideas in the story all fit together.

\section*{- DIRECT EXPLANATION}
1. Begin this lesson by telling children that stories are made up of different parts. Ask, "What are the parts of a story?" Students should list beginning, actions, and outcomes, among other things. Then ask, "Does it make any difference what order the parts are in? Can we arrange them in any order in a story?" Emphasize that the sequence of cvents does make a difference. Direct students' attention to the poster and say, "Just like links in a chain, the ideas in a story hold one another together. It is important that they are in the right order."
2. Tell students that it is easy to identify the beginnings, actions, and outcomes of stories. Ask them to turn their workbooks to page 72 to the passage entitled, "A Day at the Zoo" and to read the passage silently.
3. When students have com-
 pleted reading, ask individual students to describe the beginning, actions, and outcome of the passage.
- Beginning-Rode a bus to the zoo
- Actions- Got tickets and maps Watched monkeys Visited birdhouse Ate lunch Saw seals perform Rode a bus home
- Outcome- Ben enjoyed the zoo and is eager to visit it again.
4. Ask students, "What happened first and last? How can you tell?" Discuss the beginnings and endings of various stories.
5. Then ask, "What are good clue words that help you find the right order of events?" Students should identify words such as first, then, next, before, and after. Locate some of these clue words in the passage and point out how these words help signal the right order of events.
6. Explain to students that it is important to identify what happens first and last in a story and to search for words that tell them about the order of events.

1. Direct students to turn their workbooks to page 73 to the passage entitled, "Lost Lunch." The four parts of this passage are presented in a scrambled order. Ask students to read the entire page silently and to number the sections in the proper order in which they occurred \((2,4,1,3)\).
2. When students have completed the assignment, discuss the order of events, and ask students how they knew which was the beginning and which was the ending. Ask what other clues they used? Encourage students to identify clue words as well as the sequence of actions.
3. Direct students to turn in their workbooks to the next page (page 74), "Telling Things in Proper Order," and to number each passage in the order in which the events occurred. This can be done individually, as a group exercise, or in small groups. When the students have completed the entire assignment, review their answers. Emphasize how they can identify the
 beginning and outcome of each passage. Encourage them to always check to make sure that they understand the order of events in stories that they read.

\section*{Understanding Temporal and Causal Sequences}


FOCUS
As children search for meaning in text, they need to relate information from different sentences. They need to look for connections among ideas and sequences of events. In the first lesson, the focus was on temporal sequences of events. In this lesson, the focus will be on connections among causes and outcomes. Piaget's studies revealed that children often have difficulty understanding causal sequences until middle childhood. It is easier for young children to reason about temporal order than causal order. They have difficulty, especially in figuring out the causes for outcomes, when they reason backwards from the endings. Piaget found that children sometimes confuse the sequence of events and presume that temporal and causal order are the same thing. For example, when Piaget asked 7 -yearolds to complete a sentence such as, "The man fell off his bicycle because . . .," children said, "because he hurt himself." Children tend to say what happens next in time and do not reason backwards to reconstruct a probable causc. In this lesson, children will learn to link causes and outcomes. As they read, they need to search text for the reasons why particular things happened, why characters feel a particular way, and why the story' ended the way it did. Children's understanding of text meaning can be improved if they know how causal sequences help to integrate the meaning, and if they try to link the information from different sentences.
1. To teach students to identify causes and outcomes in stories.
2. To teach students to make inferences that integrate causal sequences.

\section*{- REVIEWING THE METAPHOR}

Remind students that events in a story are linked together from the beginning to the end. A story isn't just a bunch of isolated sentences. The sentences fit together like links in a chain. Remind students that they need to look for the connections that are provided by temporal and causal sequences. Part of reading involves looking for clue words that help identify what happened in the right order and why things happened in a particular way. Remind students that they have to construct these links and chains that tie a story together.

\section*{DIRECT EXPLANATION}
1. Direct students' attention to the poster and remind them that stories have events that are connected like links in a chain. In the previous lesson, they looked for events that occurred first, next, and last so that they could see how things are ordered in time. Ask, "Why is it important to know the right order of events in a story?" Encourage a discussion that focuses on the pitfalls of mixing up the order of events and the benefits of integrating the meaning in the right sequence.
2. Ask students, "What words are good clues for understanding the sequences within stories?" Students should generate a variety of responses such as before, after, then, finally, in the beginning, once upon a time, because, and so on. Make sure that students understand how these words mark the time and sequence.
3. Explain to students that a particular kind of link in a chain of events connects causes and outcomes. Refer to it as a "causal sequence" and tell students that it is very important. Ask, "What is a cause for something?" Encourage students to respond that causes are the reasons why things happen. They are events that make another thing happen. Offer examples such as "If there is a broken window, what could the cause be?" Explain that it might have been caused by a rock, a baseball, or the wind. Remind students that cause explains an outcome.
4. Ask, "Is it easy to find the causes in stories?" Point out to students that it is not always easy. Emphasize that causes often have to be inferred because they are not directly stated in the story. This makes the readers' task even more difficult because they have to look for causes that are hidden in the text. They have to be good reading detectives to find these clues and the causes.
5. Tell students that they are going to practice making inferences and finding causes in stories. Direct them to turn their workbooks to page 75 to the story entitled, "The Tiger's Whisker." This passage can be read silently or aloud.

\section*{The Tiger's Whisker}

Adapted by foan Roth

Once there was 1 woman
who lived in the woraks with her husband. One day. her hushand onot very sick. The moman was upset by her huxhand's illness and wanted to make him well She tried everything she could think of, but nothing worked. At last she remembered that medicine made from a tiper's whisker would heip him get well "Tigers are sn dangerous," she said to herself. "But I must ret a whisker!" Sn the woman went in the tiget's cave and put some fored in front of it. Then she staried to sing sofily because siaried to sing sofily because
tipers like maxic. The bis tizer tipers like masic. The big tiger
heard the soft singing. came out, and ate the food. "W'hy are yout being so nice to me?" the tiger asked. "Well. I wanted to steal one of your whiskers," she said "But now I can't." She felt very ashamed. "A whisker? Why ashamed. " \(A\) whisker? Why asked, "Since you ate so nice, asked. Since you are so nice. would be happy to give you whisker!"' So he gave her a whisker and asked her to come hack and sing to him whenever she wanted in. So the wom husband got well.
6. When students finish reading the selection, ask the following questions:
- "What is the beginning?" (Husband was sick.)
- "What is the action?" (Woman tries to trick the tiger but can't.)
- "What is the outcome?" (Tiger gives her the whisker. Husband gets well.) Refer to the poster that links beginnings, clue words, actions, and outcomes to identify this sequence in the story.
7. Next tell students that they need to search for the causal connections in this story, and ask:
- "Why did the woman want to trick the tiger?" (To get a whisker to make the medicine to save her husband.) This question is a good way to illustrate the chain of events and the causal connections among the whisker, the medicine, and the cure.
- "Why did the tiger come out of the cave?" (Because the woman sang and gave the tiger some food.)

Point out that a clue word helped students identify this causal sequence, and look in the story for the phrase "because tigers like music." Other clue words that appear in this story are so, since, then, and finally. Point out to students that these words help identify the temporal order and the causal sequences.

■ "Why did the woman feel ashamed?" (She was going to trick the tiger and steal a whisker.)
Point out to students that the woman's feelings are not explained in the text, and that they have to infer why she was ashamed.
- "Why did the husband recover?"

Tell students that the end of the story also requires an inference. It doesn't say that the woman made medicine from the tiger's whisker, gave it to her husband, and that it helped him recover, but the reader can connect the links by making the right inferences. Although it never says that the whisker medicine made the husband well, it is very likely.
8. Conclude this part of the lesson by focusing on the value of making causal inferences. Tell students that they can get a better understanding of stories if they look for links in a chain of events.

\section*{- GUIDED STRATEGIC READING}
1. Encourage students to practice identifying the links in a chain of events as they read. Direct them to the selection entitled, "Laundry Lesson" on page 76 and the worksheets entitled, "Links in a Story" on pages 77-78.


Ask students to read this selection silently and to identify the beginning, actions, and outcome on the worksheet. Then have them answer the causal sequence questions that are linked together.
2. After students complete the assignment, review their answers.
- Beginning - Joe had a dirty uniform. He decided to do his own laundry.
- Actions - He gathered a lot of his dirty clothes and a new sweatshirt and put them in the washing machine together.
- Outcome - The sweatshirt bled the red color and all his clothes turned out pink, but his mother bleached eferything so that his uniform was white again.
3. Then review students' answers to the causal sequence questions.
- "Why did Joe do his laundry?" (His football uniform was dirty.)
- "Why did his uniform turn pink?" (His new red sweatshirt bled red into the rest of the laundry.)
- "Why didn't Joe want to go to football practice?" (He was afraid the other boys would laugh at him.)
- "How did Joe's mother solve the problem?" (She bleached the white uniform to remove the pink.)
As students review their answers, point out how clue words helped to identify causal and temporal sequences in this story. Also point out the kinds of inferences that students have made in their answers. The inferences can be about causes, feelings, and sequences. As students review their answers, point out how different inferences are possible from different readers, but that most children have identified the same causes and the same links in the chain of events.

In this lesson, children were taught to identify beginnings, actions, and outcomes of temporal sequences. They also learned about cause-effect relations and how to search for causal sequences. They were taught that clue words help to identify these sequences, but temporal and causal orders often require inferences. Children practiced making these inferences and identifying these sequences independently.

\section*{SPECIFIC FEEDBACK TO STUDENTS}
1. Ask, "W'hat are the links in a chain of events that we look for?" Encourage a discussion that focuses on beginnings, actions, and outcomes. and also cause-effect sequences. Encourage students to discuss these sequences explicitly and tell how they are connected.
2. Ask, "How do we construct these links in a chain?" Encourage students to discuss the use of clue words to put things in temporal and causal order. They should also mention the importance of inferences for identifying causes.
3. Ask, "How does it help you understand the story better when you discover the links in a chain of events?" Students should realize that they are integrating meaning from across sentences and putting things in the right order as they construct the links. Comprehension is richer and more meaning is discovered because they have elaborated on the text. Make sure they understand the importance of connecting ideas within text as they make these sequences.
4. Praise students for their good inferences and their construction of the chains of events. Encourage them to look for these connections among ideas as they read.
- INDEPENDENT EXERCISE


The activity located on page 79 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

\section*{LESSON}

\section*{Understanding Temporal and Causal Sequences}


\section*{FOCUS}

The construction of meaning while reading involves the integration of information from many sources. In these lessons focus has been on connecting temporal events in appropriate orders and recognizing causes for particular outcomes. As children learn about these sequences of events, they will search for them as they read. Connectives such as before, after, since, and because provide good clues about temporal and causal sequences. Students need to practice identifying clue words and connecting them in appropriate sequences as they read. In this lesson students are encouraged to apply these strategies independently in a variety of reading situations.

To help students identify temporal and causal sequences independently.

\section*{REVIEWING THE METAPHOR}

Begin this lesson by calling students' attention to the poster and reminding them that stories include chains of events. These events are ordered in time, and it is important to know what happens first, next, and last. Point out that there are also cause-effect sequences in stories that help explain how characters felt and what happened. Explain that these links help students to connect ideas as they read and promotes their understanding.
1. Select a story or fable for students to read that includes a clear sequence of temporal or causal events. (This exercise works best with fiction and narrative text.) Have students read independently and identify the links in the chain of events on the worksheet entitled "Linking Ideas," located on page 80 in their workbooks.


Remind students to look for the order of events as they read and try to understand why things happened the way they did.
2. After students read the selection and fill in the worksheet, review their answers to be sure they have correctly identified the beginning, the actions, and the outcome. They should have linked the temporal and causal events in the proper order. Discuss what clue words they used and how linking ideas helped them understand the story better.
3. Optional Exercisc: Instead of having students read an entire selection and fill in worksheets, read part of a selection to students and then stop in the middle. Ask students to identify the beginning and the actions, and then ask volunteers to supply the rest of the story. Each student can write their own sequence of events and ending for the story, and then share them with the class. (The worksheet "Linking Ideas" can be used for this exercise also.) The class discussion should focus on the diverse kinds of endings that students supply. Make sure the discussion identified each student's links, i.e., the actions, the outcome, and the causes. Point out to students that the story doesn't make sense unless the events are connected to form a chain.
4. Optional Excreise: As an alternative to reading, students can be asked to write their own stories that have a clear beginning, action, and outcome. They can do this individually or in small groups. The worksheet can also be filled out and can serve as a guide for each of the links in their stories. When students finish writing their stories, they can share them with the class. Point out each of the links they have included.
5. Optional Exercise: As a small group exercise, ask students to write a few sentences on a familiar topic and then integrate them as a group. Have them write each sentence on a separate strip of paper and then mix them together in a pile. The students can then read all the sentences and order them in a sensible way. Have students rewrite or delete some sentences if necessary, but encourage them to create an intact description of the topic. They can use the worksheet as a guide to the beginning, action, and outcome, and share their group's passage with the entire class.

\section*{SUMMARY}

In this lesson, students learned to generate sequences of events ordered by time or cause-effect relationships. They practiced identifying sequences as they read, or they wrote their own sequences of events in stories, descriptions, or explanations. Students learned that completing stories or unscrambling sentences helps them put things in proper order and that the process of thinking and revising while reading and writing are critical.

\section*{SPECIFIC FEEDBACK TO STUDENTS}
1. Point out how students created links in chains of events by reading, writing, and thinking. Ask, "Does it help you understand a story better if you connect the links in the chain of events?" Encourage a discussion of the positive value of integrating ideas.
2. Ask, "What helps you connect the links in the chain as you read?" Encourage students to share their own strategies for identifying clue words, starting at the beginning, thinking about the ending, and checking their own ideas.
3. Tell students that whenever they read and write, they need to connect ideas in a sequence of events so that they make sense from the beginning to the end. If they understand how things áre ordered in time and how some events cause others to happen, they will understand better as they read. Praise students for making strong chains of events and encourage them to do it as they read.

\section*{Summarizing the Main Points}


\section*{FOCUS}

Throughout these modules students have been taught to search for many ideas as they read. Some of these ideas are explicit and some implicit. Some are in single sentences, and some are connected among sentences. A good way to tie these strategies together is to teach students to summarize the important information in text. Rarely is there just one main idea in a passage. There are several important points that need to be included in a summary of the passage. Summaries include information about the five " w " questions, who, what, where, why, and when. These bits of information include inferences and personal interpretation as well as literal facts. Summaries of reading are important as written records for comprehension. They also tie reading and writing skills together. Another purpose of the summary is to check one's understanding and recall of the information. Condensing and rehearsing the important ideas in a passage aids memory by paraphrasing and personalizing the selection. In this lesson, children are taught to identify important information in stories and use those ideas in a summary.

\section*{- OBJECTIVES}

> 1. To teach students how to identify who, what, where, why, and when information in stories.
2. To teach students that a summary contains only important information.

A summary is a collection of ideas that are grouped together in a cohesive fashion. This idea is illustrated in the poster by a cowboy rounding up five horses. Each of the horses has a word written on its side-Who, What, Where, Why, and Wben-to signify a main point in the story that should be included in a summary. Rounding up ideas in a summary is analogous to corralling the right kinds of horses. Not all the ideas should be rounded up in a summary, just the important ones. Likewise, the "corral" should be a good one so that important information doesn't slip away.

\section*{DIRECT EXPLANATION}
1. Explain to students that the lesson today is about making a summary. A summary is a brief retelling of what they read. It doesn't include all the information, just the important parts.
2. Direct students' attention to the poster and ask, "How is making a summary like rounding up your ideas?" ..Encourage students to make the analogy between a round-up of horses and a round-up of ideas. Ask, "What kinds of ideas do you round up?" Encourage students to read the five " \(w\) " questions on the horses, and tell them that a good summary includes information about each of these questions.
3. Ask, "How do you know what the important information is in a passage?' Explain to students that the important points are not always clear. They need to ask themselves questions about the five " \(w\) 's" such as the following:
- Who are the main characters?
- Where does the story take place?
- What are the sequences of actions?
- When did things happen?
- Why did things turn out the way they did?

Point out that students need to ask themselves these questions in order to identify the important points of information.
4. Tell students that a good time to ask themselves these questions is after they read the story to make sure that they understood all the key points. If they don't know the answers to some of these questions, they may have to reread parts of the selection. Once they know the answers to these questions, they can summarize the story in their own words. Remind students that they don't have to tell everything that happened, just the key points.

\section*{\(\square\) GUIDED STRATEGIC READING}
1. Ask students to turn their workbooks to pages \(81-83\) to the story entitled, "The Cobbler's Tale." Before they start reading, tell students that they are going to identify the important points in this selection. Remind them to ask themselves who, what, where, when, and why questions as they read so that they can fill in the worksheets when they finish. Have students read the passage silently and then fill in the worksheet located on page 84 in their workbooks.

2. After students complete the exercise, review their worksheets with the entire class. Sample answers include the following:
- Who - King of France, cobbler, cobbler's son, wise old cat
- When - Long ago
- Where - In France
- What - Cobbler made fur-lined shoes (with the help of a cat).
- Why - The King had big feet and a tender toe.

Encourage children to elaborate on each of these important points as they describe how they filled in their worksheets.
3. After reviewing the worksheets, ask a volunteer to provide a summary of the story. Then ask other students if anything important was omitted. Also ask if anything unnecessary was included. Make sure that students understand that summaries include just the important information. Call on additional volunteers to provide summaries.SUMMARY
In this lesson students read a fable and identified key information by answering the questions who, what, where, why, and when. They practiced summarizing the important information and learned that a summary is a good way to check their comprehension and memory of a story:

\section*{SPECIFIC FEEDBACK TO STUDENTS}
1. Ask, "What is a summary?" Encourage students to describe a summary as a brief retelling of the important points of a story.
2. Ask, "What information is included in a story?" Encourage students to identify the five "w's" on the poster as questions they should ask while reading.
3. Ask, "Why is it important to round up these ideas? How does it help you remember?" Answers should emphasize the value of condensing and reviewing the information and checking onc's own comprehension.
4. Finally, explain that a summary is a good way to connect ideas in text so that students know that everything makes sense. Summarizing in their own words also helps them to remember what they've read so that they can share it with someone else.

Praise students for locating the key information and providing it in summaries.

\section*{INDEPENDENT EXERCISE}


The activity located on page 85 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

\section*{Summarizing the Main Points}


\section*{FOCUS}

An important aspect of a summary is to identify the key information in a selection. In the previous lesson, children were taught to ask themselves questions about the " \(w\) 's" - who, what, where, when, and why-in order to check their understanding of essential information. In addition, children need to realize that a summary contains only necessary information and that the information is ordered in the correct sequence. Thus, a summary involves many of the strategies that children learned in earlier modules, including causal-temporal sequences and main ideas. In this lesson, students will be asked to write summaries of a selection. The lesson also provides a good review of strategies that were taught earlier and reinforces the connection between reading and writing.
- OBJECTIVES
1. To teach students the sequence of important information in a summary.
2. To teach students to write concise summaries.

\section*{- REVIEWING THE METAPHOR}

Direct students' attention to the poster and remind them that the important points to include in a summary are signalled by the five "w's." They should ask themselves those questions as they read, and also when they finish to make sure that they have understood what they have read.

Tell them that rounding up ideas is like lassoing horses and bringing them into a corral. Remind them that good readers are selective in the ideas that they include in their summary, just like good cowboys are selective in the horses that they corral.

\section*{DIRECT EXPLANATION}
1. Ask students, "What are the important points to include in a summary?" Encourage the identification of the five " \(w\) " questions in students' answers.
2. Ask, "Does it make any difference in what order you write the information in a summary?' Point out to students that it does make a difference. The order of the summary should be the sequence that describes how events unfolded in time or according to causal sequences. Usually this is the same order of events as in the story, but not always. Explain that a good summary has the following characteristics:
- It includes all the important information.
- It doesn't include any irrelevant information.
- It says the important things in the correct sequence.
3. Ask students, "Is it easy to write a summary like this after you read a story?" Encourage students to tell how they feel about writing summaries. Make sure they understand the difficulty and benefits involved in summarizing a story.

\section*{- GUIDED STRATEGIC READING}
1. Tell students that they are going to practice writing a summary that includes all the important information in the right sequence. Then tell them to turn to pages \(86-87\) in their workbooks to the passage entitled, "Coyote and Man." Explain that this is an Indian myth that they should read and then summarize on the worksheet entitled, "Round Up Your Ideas," located on page 88 in their workbooks.


2. Allow students ample time to complete reading and writing (approximately 20 to \(30 \mathrm{~min}-\) utes). When students complete the assignment, ask individual students to read their summaries to the rest of the class. Emphasize the inclusion of important information in the right sequence. Point out the good points in students' summaries and correct any errors.

\section*{SUMMARY}

In this lesson, students practiced reading for criticarinformation and writing a summary. They learned to identify key infopmation in a correct sequence and practiced writing a concise summary independently.
\(\square\) SPECIFIC FEEDBACK TO STUDENTS
1. Ask, "What are the key elements of a good summary?" Encourage students to identify that important information, relevant information, and information in the right sequence are the important elements of a good summary.
2. Ask, "Does it help you understand the story better when you make a summary?" Encourage students to notice the value of comprehension and memory in writing a summary.
3. Ask, "Was it easy to write a summary?" Encourage students to express their feelings about writing and praise them for doing a good job. Point out that reading and writing go together, and that often they can stop as they write, and rercad to find the important points.
4. Remind students that writing a summary or saying the story in their own words is a terrific way of checking their understanding when they finish reading. Encourage them to do it often.

The activity located on pages 89-90 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

\section*{Soap Box Derby}

Resd the following newt story. Write a shon summary of the story inciuding the who, what, whers. whom, end why information.

The hind annual Culver City Suap Box teriby
was held urday on Main Street at \(3.00 \mathrm{p} . \mathrm{m}\)
Mayor taniel liolioway wat the speaker at the opening ceremonies held in the town sente:
"Once again it's time for our town's higgest social event of the summer teets all have fun and enjory the day with tamily and friends."

The Mayor's comments were made as cloudy
skies broke into sunshine
A large crowd gatherrd as early as nowin to waich the racers put the finishing touches on their cars.

A frotive firurit of holy munul conith to feit everywhere Young children lined the streets bolding Hags and red. white, and tlue balloons The high school band played "The Star spangled Banner" and other patrotic songs.

The racers were fast and exciting. In the Junior Division, this year's winner was eight-year old Matt Billings. In an upact victory, Matt heat out scot Harver for first place by only three seconds.

Carolyn Parker's "American Flaz" race car was judged the best for its patriotic design.

This year the nex Midger Division wax added for children four io fire years old. Five-yeat-old Stephanic Willis was this year'slucky winner Bryan Conper tonk hume first prize for hos "Zesomobile" racer

A record crowd of ower one thourand people enjoyed inday 's races. Paul Ilohson, the ouner of "The sweet Sheppe" reported selling oner five hundred ice cream cones. He was sold out by R:On p m., lust as the day's rvents came in an end

Summary: \(\qquad\)
\(\qquad\)
.
,


\section*{Lesson Round Up}

\section*{Summarizing the Main Points}


\title{
What are the important points? \\ Can I summarize them in my own words?
}

\section*{FOCUS}

Summarizing is an important strategy to be transferred to many tasks. It can be linked with paraphrasing as a means of teaching students to express the meaning in their own words. Summarizing can be a periodic check of comprehension as well as an effective aid to memory. One of the key ideas that students learn from summarizing is that reading is not completed when they finish saying the words. Summarizing is a way of thinking about the meaning and making sure they understand it. Summarizing is important if they share stories with other people, or if they write about them. Thus, summarizing helps to connect reading, thinking, writing, and speaking.
- OBJECTIVE

To promote students' independent use of the strategy of summarizing. \\ REVIEWING THE METAPHOR}

Students should realize that writing a summary is a process of rounding up important ideas. Self-questioning about the five "w's"-who, what, where, when, and why - provides the essential information to be included in a summary. Students also need to organize that information in the correct sequence so that it makes sense.
1. Select any content area of pleasure reading that lends itsclf to a concise summary. Fables, fiction, and biographies often lend themselves to information about the five "w's." However, summarizing can also be practiced with expository text from social studies or seience.
2. Assign the passage to students and tell them that they should fill out the worksheet entitled, "Round Up Your Ideas," located on page 91 in their workbooks. Remind them that they should search for the important information and summarize it in the correct sequence.

- SUMMARY

In this lesson students practiced making summaries from content area or recreational reading. They learned to ask themselves questions about the five " \(w\) 's" and to apply the summarizing strategy independently. They learned that summaries include selective information that is central to the passage and information that communicates main ideas.

\section*{\(\square\) SPECIFIC FEEDBACK TO STUDENTS}
1. Review students' summaries and provide feedback by grading their workbooks or discussing the summaries in class. For example, you can ask students to read their summaries individually and allow other students to evaluate whether or not they are complete and adequate.
2. Ask, "What kinds of information are included in good summaries?" Encourage children to discuss the five "w's" and the selective inclusion of main ideas.
3. Ask, "When is it useful to make a summary?" Encourage children to discuss that oral and written summaries help to consolidate information so that it can be recalled or told to another person later.
4. Praise students for their good summaries and encourage them to reflect and summarize what they read.

Appendix 4

\section*{The Cloze Test (A)}


\section*{Fill in the empty spaces}
- A giraffe lived in one of the forests (1) ---------------------, It used to be proud of its beauty to the extent (2) of .--..--...----- and arrogance towards all the forest's animals. There was (3) -----------a monkey in the forest that was bothered by its arrogance. It thought to give it an unforgettable (4) ----------lesson (5)
-- in front of a high fruit tree.
The monkey said to the giraffe, "You cannot reach this high ( \(60-\cdots----------\), but I can."

The giraffe extended its long neck, but was not able to reach. It said, (7) "Oh, monkey, can you?" The monkey jumped quickly and climbed on the back of the giraffe (8) ------------ the fruit.

The giraffe said, you did not pick (9) ---------------- alone. "The monkey replied": you also, giraffe. We were able to pick it (10)

\section*{The Cloze Test (B)}


\section*{Fill in the empty spaces}
- A lion lived in one of the forests (1) ------------------, it used to be proud of its strength to the extent (2) of ------------------ and arrogance towards all the forest's animal. There was (3) a fox in the forest. It decided (4) -------------- to give the lion an unforgettable lesson. It thought about a trick to free all animals from the lion's domination. (5) And (6)

One day, while the fox was standing on edge of a well, it saw itself in the (7) \(\qquad\) ------------------. It came to his mind to go and tell the lion that there was another competitor lion (8) ----------------------in the well. The fox went and told the lion about that, and the fox came with then lion to (9) ...--.---------------. When the lion looked into looked into the well, it saw its reflection in the water. It jumped into it thinking it was (10) ------...------------ so it sank and died.

Appendix 5

\title{
Index of Reading Awareness Items
}
\begin{tabular}{|c|c|}
\hline \multicolumn{2}{|l|}{Score} \\
\hline & Item \\
\hline \multicolumn{2}{|r|}{Evaluation} \\
\hline \multicolumn{2}{|r|}{1. What is the hardest part about reading for you?} \\
\hline 1 & \multirow[t]{2}{*}{\begin{tabular}{l}
a. Sounding out the hard words. \\
b. When you don't understand the story.
\end{tabular}} \\
\hline 2 & \\
\hline 0 & c. Nothing is hard about reading for me. \\
\hline \multicolumn{2}{|r|}{2. What would help you become a better reader?} \\
\hline 1 & a. If more people would help you when you reading. \\
\hline 0 & b. Reading easier books with shorter words. \\
\hline 2 & \begin{tabular}{l}
c. Checking to make sure you understand what you read. \\
3. What is special about the first sentence or two in a story?
\end{tabular} \\
\hline 1 & a. They always begin with 'Once upon a time...' \\
\hline 0 & b. The first sentences are the most interesting. \\
\hline 2 & c. They often tell what the story is about. \\
\hline & 4. How are the last sentences of a story special? \\
\hline 1 & a. They are the exciting, action sentences. \\
\hline 2 & b. They tell you what happened. \\
\hline 0 & \begin{tabular}{l}
c. They are harder to read. \\
5. How can you tell which sentences are the most important ones in
\end{tabular} \\
\hline & A story? \\
\hline 2 & a. They're the ones that tell the most about the characters and What happens. \\
\hline 1 & b. They're the most interesting ones. \\
\hline 0 & c. All of them are important. \\
\hline \multirow[t]{2}{*}{Score} & Item \\
\hline & Planning \\
\hline
\end{tabular}
6. If you could only read some of the sentences in the story because You were in a hurry, which ones would you read?
a. Read the sentences in the middle of the story.
b. Read the sentences that tell you the most about the story.
c. Read the interesting, exciting sentences.
7. When you tell other people about what you read, what do you tell them?
a. What happened in the story.
b. The number of pages in the book.
c. Who the characters are.
8. If the teacher told you to read a story to remember the general meaning, what would you do?
a. Skin through the story to find the main parts.
b. Read all of the story and try to remember everything.
c. Read the story and remember all the words.
9. Before you start to read, what kind of plans do you make to help you read better?
a. You don't make any plans. You just start reading.
b. You choose a comfortable place.
c. You think about why you are reading.
10. If you had to read very fast and could only read some words, which ones would you try to read?
a. Read the new vocabulary words because they are important.
b. Read the words that you could pronounce.
c. Read the words that tell the most about the story.

Regulation
11. What things do you read faster than others?

\section*{1}

2
0
a. Books that are easy to read.
b. When you've read the story before.
c. Books that have a lot of pictures.
12. Why do you go back and read things over again?
a. Because it is good practice.
b. Because you didn't understand it.
c. Because you forgot some words.
13. What do you do if you come to a word and you don't know what it means?
a. Use the words around it to figure it out.
b. Ask someone else.
c. Go on to the next word.
14. What do you do if you don't know what a whole sentence means?
a. Read it again.
b. Sound out all of the words.
c. Think about the other sentences in the paragraph.
15. What parts of the story do you skip as you read?
a. The hard words and parts you don't understand.
b. the unimportant parts that don't mean anything for the story.
c. You never skip anything.
\begin{tabular}{|c|c|}
\hline Score & Item \\
\hline \multicolumn{2}{|r|}{Conditional Knowledge} \\
\hline \multicolumn{2}{|r|}{16. If you are reading a story for fun, what would you do?} \\
\hline 1 & a. Look at the pictures to get the meaning. \\
\hline 0 & b. Read the story as fast as you can. \\
\hline 2 & \multirow[t]{2}{*}{17. If you are reading for science or social studies, what would you do to remember the information?} \\
\hline & \\
\hline 2 & a. Ask yourself questions about the important ideas. \\
\hline 0 & b. Skip the parts you don't understand. \\
\hline 1 & \\
\hline & 18. If you are reading for a test, which would help the most? \\
\hline 1 & \multirow[t]{2}{*}{\begin{tabular}{l}
a. Read the story as many times as possible \\
b. Talk about it with somebody to make sure you understand it.
\end{tabular}} \\
\hline 2 & \\
\hline 0 & c. Say the sentences over and over. \\
\hline & 19. If you are reading a library book to write a book report, which would help you the most? \\
\hline 1 & a. Sound out words you don't know. \\
\hline 2 & b. Write it down in your own words. \\
\hline 0 & c. Skip the parts you don't understand. \\
\hline & 20. Which of these is the best way to remember a story? \\
\hline 0 & a. Say every word over and over. \\
\hline 1 & b. Think about remembering it \\
\hline 2 & c. Write it down in your own words. \\
\hline
\end{tabular}

Appendix 6

\section*{Appendix 3: Think-aloud Reading Task A}

\section*{The Earth and The Sun}

The Earth and the sun are very different. Their sizes are different. The sun is a star. The Earth is a planet. The sun has no living things on it. The Earth has anything living on it. The sun is millions of miles from the Earth, and is too far to give light and warm to the Earth. The Earth is spinning round and round all the time. It takes the Earth twenty-four hours, a whole day and night, to make one complete spin. A year is the time takes the Earth to travels around the sun.

\section*{Comprehension questions}
(Topic) 1.Tell my about what you just read?
(Vocabulary) 2.What are 'planet' and 'spin'
(Fact) 3.How do the Earth and the sun are different?
(Fact) 4.How long it takes the Earth to complete one spin?
(Fact) 5.How long it takes the Earth to travel around the sun?
(Inferential) 6. Why do you think the sun is important to us?

\section*{Appendix 4: 'Think-aloud' Reading Task B}

\section*{The Heart and The Blood}

The blood is driven round the body by the heart. The heart is a very powerful pump. It is made of muscle. The heart beats when we are sitting and stop beating while we are sleeping. The heart pumps the blood into the body. When the blood leaves the heart, it travels in tubs called arteries. After the blood has given up its oxygen and food to the cells of the body, the blood travels back to the heart first in capillaries and then in larger tubes called veins.

Comprehension questions:
(Topic) 1.Tell my about what you just read?
(Vocabulary) 2.what are 'arteries' and 'veins'
(Fact) 3. What do the arteries do?
(Fact) 4.How much does your heart beat a minute when you are just sitting?
(Fact) 5.what happens to your heart when are vary active?
(Inferential) 6. Why do you think the heart is important to us?

Appendix 7

\section*{The Reader Self-Perception Scale Henk and Melnick (1995)}

Name:
School:

Class:
Date:

Agp:
The acore
- Please, read carefully the following statements, then answer each statement by ticking the value in the box provided in the five-point scale ( \(5=\) strongly agree, \(4=\) agree, \(3=\) undecided, \(2=\) disagree, 1 strongly disagree).
\begin{tabular}{|c|l|l|l|l|l|l|}
\hline No & \multicolumn{1}{|c|}{ Statement } & \begin{tabular}{c} 
strongly \\
agree
\end{tabular} & \begin{tabular}{l} 
agree
\end{tabular} & undecided & \begin{tabular}{l} 
disagree
\end{tabular} & \begin{tabular}{l} 
strongly \\
disagree
\end{tabular} \\
\hline 1 & I think I am a good reader. & & & & & \\
\hline 2 & \begin{tabular}{l} 
I can tell that my teacher likes to listen \\
to me read.
\end{tabular} & & & & & \\
\hline 3 & \begin{tabular}{l} 
My teacher thinks that my reading is \\
fine.
\end{tabular} & & & & & \\
\hline 4 & I read faster than other kinds. & & & & & \\
\hline 5 & I like to read aloud. & & & & & \\
\hline 6 & \begin{tabular}{l} 
When I read, I can figure out words \\
better than other kinds.
\end{tabular} & & & & & \\
\hline 7 & My classmates like to listen to me read. & & & & & \\
\hline 8 & I feel good inside when I read. & & & & & \\
\hline 9 & \begin{tabular}{l} 
My classmates think that I read pretty \\
well.
\end{tabular} & & & & & \\
\hline 10 & \begin{tabular}{l} 
When I read, I don't have to try as hard \\
as I used to.
\end{tabular} & & & & & \\
\hline 11 & \begin{tabular}{l} 
I seem to know more words than other \\
kinds when I read.
\end{tabular} & & & & & \\
\hline 12 & \begin{tabular}{l} 
People in my family think I am a good \\
reader.
\end{tabular} & & & & & \\
\hline 13 & I am getting better at reading. & & & & & \\
\hline
\end{tabular}
\begin{tabular}{|l|l|l|l|l|l|l|}
\hline 14 & \begin{tabular}{l} 
I understand what I read as well as \\
other kids do.
\end{tabular} & & & & & \\
\hline 15 & \begin{tabular}{l} 
When I read, I need less heIp than I \\
used to
\end{tabular} & & & & & \\
\hline 16 & Reading makes me feel happy inside. & & & & & \\
\hline 17 & My teacher thinks I am good reader.
\end{tabular}\(\quad\)\begin{tabular}{llll|l|}
\hline 18 & Reading is easier for me than it used & & & \\
\hline 19 & I read faster than I could before. & & & \\
\hline 20 & \begin{tabular}{l} 
I read better than other kids in my \\
class.
\end{tabular} & & & \\
\hline 21 & I feel calm when I read. & & & \\
\hline 22 & I read more than other kids do. & & & \\
\hline 23 & \begin{tabular}{l} 
I understand what I read better than I \\
could before.
\end{tabular} & & & \\
\hline 24 & \begin{tabular}{l} 
I can figure out words better than I \\
could before.
\end{tabular} & & & \\
\hline 25 & I feel comfortable when I read. & & & \\
\hline 26 & I think reading is relaxing. & & & \\
\hline 27 & I read better than I could before. & & & \\
\hline 28 & \begin{tabular}{l} 
When I read, I recognise more words \\
than I used to.
\end{tabular} & & & \\
\hline 29 & Reading makes me feel good. & & & \\
\hline 30 & Other kids think I'm a good reader. & & & \\
\hline 31 & \begin{tabular}{l} 
People in my family think I read pretty \\
well.
\end{tabular} & & & \\
\hline 32 & I enjoy reading. & & & \\
\hline 33 & \begin{tabular}{l} 
People in my family like to listen to me \\
read.
\end{tabular} & & & \\
\hline
\end{tabular}

Appendix 9

\section*{LESSON}

\title{
Searching for Reading Treasure
}

\section*{Understanding Goals and Purposes of Reading}


FOCUS

\begin{abstract}
Many studies have indicated that beginning and poor readers concentrate exclusively on decoding as the goal of reading. They attend to pronunciation and decoding so much that they often do not expect the information to make sense, or seem to care if it dues. Children are often unaware of the need to plan, pause, reflect, or evaluate their own reading behavior. This initial module will stimulate students to consider "constructing meaning" as the goal of reading and will teach them how comprehension can be facilitated by strategies.

Specific reading strategies will be taught in subseguent lessons, but it is important at the outset to encourage students to begin asking themselves questions such as "Why ami I reading? Do I understand the information? Did I feel good about what I read?" As children answer these questions for them-1 selves, they will realize that understanding the meaning is the heart of reading. As they learn to discover and construct meaning, they will hopefully develop feelings of pride and enjoyment while learning to read strategically.
\end{abstract}

\section*{- OBJECTIVES}

This module will help to set the stage for future lessons by teaching children to evaluate the task, to plan their reading, and to monitor their understanding. The specific objectives are:
1. To introduce studemts to the format of RTS, including group discussions about the poster, metaphors for reading, and strategies for learning.
2. To teach students "meaning-getting" as the central goal of reading.
3. To make students aware of the need to eheck their own understanding.

\section*{UNDERS'TANDING TIIE ME'TAPHOI}

The poster illustrates the reader as a treasure hunter. finding the treasure chest - meaning - is not always casy or direct. The journey is fratught with decisions and clues provided by a treasure map. The analogy between searching for a treasure and constructing meaning while reading cmphasizes the attive nature of both endeavers. Th find the treasure, readers need to know where they are going, to use a map and clues, and to persist until they find the treasure. The similarity between searching for treasure and constructing meaning while reading should be discovered by students as they discuss the metaphor portrayed in the poster.

\section*{\(\square\) \\ DIREC'T EXPLANATION}
1. Direct students" attention to the poster and ask, "What is a treasure?" Point out that a treasure is something valuable and that it doesn't always have to be money, gold, or something material. Ask, "What is the treasure we are trying to find when we read?" Make sure students understand that getting the meaning is the "treasure," the valuable part of reading.
2. Ask students, "What is meaning?" Possible answers might include the following:
- It is when the information makes sense to me.
- It is what dalready know about the tópic.
- It's the information that I could tell somebody elsc.
- It's what the author is trying to say.
- It's the ideas that the information gave me.
- It is what 1 am supposed to understand from the passage.

Emphasize that meaning is not in the words alone but is a result of what readers think about the message. Point out to students that just as there are many kinds of treasure, there are many kinds of meaning also. Explain that text will not always mean the same thing to every reader.
3. Ask students, "Is it easy to get the meaning when you read? Do you always get the meaning the first time you read something?" Point out to students that it is not always easy to understand what they read. They need to search through text several times and think along the way.
4. Explain to students that scarching for treasure is like discovering the meaning when they read. Point out the following important steps that students should follow when reading.
a. First readers must think about why they are reading. On a treasure hunt participants must also plan each move. In other words, they have to know where they are going, and they have to make a plan to get there.
b. When searching for treasure or reading, students need to stop along the way to see if their plan is working. They can check their map and their own understanding while they read. For example, students can stop while reading and try to put the meaning into their own words, or ask themselves questions to check their understanding.
c. When students find the treasure or get the meaning, they feel good. There is excitement about discovering the treasure and pride in having been able to find it.
5. Invite students on a treasure hunt and direct their attention to the treasure map on page 1 in their workbooks.
1. Ask students to read the questions on the treasure map.

2. Ask students to turn to page 2 in their workbooks to the poem entitled, "One Day in a Swamp." Before reading the poem out loud, ask them what their goal is in reading the poem and have them fill in their treasure map. Encourage students to add other goals besides getting the meaning, such as enjoying the poem, and listening to the rhyming.
3. Ask different students to read each stanza aloud. After the first stanza ask students, "W'hy did the friends get together?'" After other stanzas ask, "Why was the animal unhappy?" After the seventh stanza ask, "Did the , fish give them their wish?"
4. After reading the entire poem, ask students, "What happened to the animals?" Then ask students to answer the question at the end of the poem, "What is the meaning of this poem?' Encourage students to write different answers that focus on the animals' dissatisfaction with themselves and their foolish dreams to be somebody else without considering the consequences.
5. Ask students, "Was it easy to find the treasure in this poem? Did the poem directly state the meaning? Did you have to search through the poem to find the treasure?" Point out the many times the meaning is hidden or implied, and that students have to think about what the words say in order to get the meaning.
6. Ask students, "How did you feel after you found the treasure of this poem? It wasn't easy to get the meaning and you had to search for it, so you should feel proud that you understood it. You may also have enjoyed the poem because it was humorous and cute." There might have been students that felt confused. Reassure them. They will soon learn strategies to discover the meaning of what they read.
7. Optional Exercise: Encourage a discussion of proverbs that express a meaning similar to that of the poem, such as "The grass is always greener on the other side of the fence." The critical point is to show students how they must search for the treasure by thinking about the meaning.

In this introductory lesson, children were taught that the goal of reading is to understand, enjoy, and learn as they read. Students learned that the RTS program is designed to increase their awareness and conceptual understanding of reading.
\(\square\) SPECIFIC FEEDBACK TO STUDENTS
1. Ask, "What did you learn today about finding meaning in reading." Encourage a discussion that includes the following:
- Meaning is the treasure of reading.
- You have to search for meaning while you read.
- Searching for meaning is not always easy or automatic.
- You should stop once in a while as you read to see if everything makes sense.
- You should feel good when you find the meaning.
- Clues (a treasure map) help you understand what you read.
2. Remind students that understanding the meaning is the goal of reading. Good readers know that finding the treasure means searching for meaning, using clues, and thinking along the way.

\section*{INDEPENDENT EXERCISE}


The activity located on pages 3-5 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

\section*{Searching for Reading Treasure}

\section*{Understanding Goals and Purposes of Reading}


\section*{FOCUS}

A fundamental goal of reading is to construct meaning from text. Readers combine information in the text with their existing knowledge and embellish their understanding as they read. The poem in the first lesson illustrated that readers have to think about the words in order to find the meaning. In this lesson, three basic strategies to help students search for meaning will be introduced and claborated on in later modules.
1. Thinking about the title and topic of the selection helps readers to activate relevant background knowledge.
2. Pausing and paraphrasing help to reassure readers that everything makes sense as they read.
3. Summarizing the passage helps to consolidate the main points of a passage after reading.

The primary purpose of this lesson is to show students that searching for meaning requires effort and strategies.
1. To help students recall that the main goal of reading is to find the meaning.
2. To help students recognize three strategies that help to find the meaning:
a. Think about the title and topic before reading.
b. Stop and check understanding while reading.
c. When finished, summarize the main points.
3. To help students state their feelings about finding meaning in reading.

\section*{REVIEWING THE METAPHOR}

Direct students' attention to the poster and ask, "How is reading like searching for treasure?' Encourage a discussion that mentions the following:
- Meaning is the treasure.
- Meaning can be hidden.
- Effort is required to search.
- Sometimes readers feel lost if they cannot find the meaning.
- Clues and maps are helpful in searching.
- Finding the treasure is satisfying.

\section*{DIRECT EXPLANATION}
1. Say, "Today we are going to learn some new ways to help you search for meaning. The first clue is to think about the title of a story. Can anyone explain why that might help you find the meaning?"

Discussion should include the following answers:
- The title tells the topic.
- It includes names or places.
- It gives information about the kind of reading selection (e.g., science, social studies, fiction).

Ask, "Why is it helpful to know what a story is about before you start reading?"
- You can think about what you already know about the topic.
- You can guess what happens in the story.
- So you can read the story to see if you're right.
- You can concentrate on the main points when the topic is known.
2. Praise the students. Then say, "Now let's talk about a second clue that you can use. As you read, sometimes you can stop and say the meaning in your own words. Why is this helpful?"
- You check your own understanding.
- If you are having problems, you know where the difficult parts are.
- You can say the meaning in a way that makes sense to you.
- You can guess what happens next.
3. Praise the students. Then say, "The last clue that you can use is to think about what you have read when you finish. Summarize the important parts. Why is this a good thing to do?"
- You condense the reading to just the important points.
- You say it in your own words.
- You don't just close the book and forget what you read.
4. Repeat for the class what the three strategies are and how they work.
- Look at the title-think about the topic.
- Stop once in a while-say the meaning in your own words.
- Think about the whole passage-summarize the important points.

Remind students that these are clues that will help them search for meaning. Tell them that they can practice using these clues on a story in their workbooks. Ask them to turn to the story on page 6 .

1. Before students read the story, ask them to look at the treasure map on the next page. Notice that it elaborates on information from the previous lesson.
2. Ask, "What is your reading goal?" Direct students to fill in their treasure maps with their reading goals as each item is discussed. Point out that different students may have different reading goals.
- To find the meaning.
- To have fun.
- To read a new story
- To practice using my clues.
3. Have a student read the title aloud and ask, "What do you think this story is about?'
- Treasure hunters, pirates
- Gold, money
- Buried treasure chest

Discuss the "coincidence" that they are searching for reading treasure as they read a story about buried treasure.
4. The passage can be read aloud with students taking turns. After the ninth sentence, The sails bung limp, ask "Can someone tell me in their own words what has happened so far?' Encourage discussion. "Why were the sails limp? Does this make sense? What is going to happen?' Ask students to fill in their treasure maps with what they think will happen next.
5. Have students continue to read the story aloud and stop after reading the sentence, Everybody was looking in the wrong place! [Paragraph 2, sentence 6.]

Ask, "Can anyone tell me the meaning in their own words? Why did it take so long for people to find the ships?" Point out that good maps helped find the ships, just like good clues help students read the story. Stopping and checking the meaning helps readers understand better.
6. Ask students to finish reading the story and ask, "Can someone summarize the main points of the story?'
- Treasure from the New World was lost 350 years ago.
- A hurricane sank the ships and sand buried them.
- Nobody could find the ships because the maps switched the names of the islands.
- Old maps were found, but it still took years to find one ship.
- The other ship is still buried somewhere.

Encourage many students to participate in the summary and make sure that the summaries include only main points, the order of events is correct, and nothing important is omitted. If desired, students can write an abbreviated summary in their workbooks (e.g., Two ships sunk a long time ago. Nobody found them because the maps they were using were incorrect. When the correct maps were found, one lost ship was recovered.)
7. Ask, "How do you feel about using the three clues? Did they help you find the meaning? Were they easy to use?" Encourage a discussion of the benefits of using the three clues.
\(\square\) SUMMARY
In this lesson, students were taught the three strategies to help them search for meaning. They learned that the strategies take more time and effort than just reading the story without stopping, but thinking before, during, and after reading is what good readers do.

\section*{- SPECIFIC FEEDBACK TO STUDENTS}
1. Ask, "What are the three clues you learned to use today?"
- Read the title.
- Paraphrase periodically.
- Summarize the main points.
2. "Why are they important? Are they worth a little extra time and effort to use them?"

Encourage students to talk about their reactions to thinking while reading. End by praising them for trying hard and using the clues to find the buried treasure.


The activity located on pages 8-9 of the Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have them apply what they have learned.

\section*{Recognizing Three Kinds of Meaning}

Turning on the Meaning


\section*{FOCUS}

Discovering meaning is an important theme in the first five modules. In the first module children were taught that getting the meaning was a fundamental goal of reading. In this module, different levels or kinds of meaning that pupils can construct while they read are taught. The three kinds of meaning are literal, inferential, and personal meaning. Literal meaning refers to the explicit words in the text. Inferential meaning refers to implied, subtle, and hidden relations that readers may construct from the reading. Personal meaning refers to the feelings experienced by individuals and to the significance of the message for each reader. The distinction among the three kinds of meaning are critical for young readers who often believe that literal meaning is the only meaning. Children seldom realize that there are different levels of understanding to be achieved while reading. The richness and variability of inferential and personal meaning are quite surprising to young readers. When they become aware that part of their goal is to discover these kinds of meaning, they begin to read differently.

The lessons in this module help children to understand that meaning can sometimes be implied, personal, and variable for different readers. In addition, the lessons help children to discriminate between formats and contents of different reading selections. Content and format can serve as guides or clues to the kind of meaning that is emphasized. Research has shown that children often fail to distinguish among types of reading materials that require different comprehension goals. Thus, the purpose of the lesson is to teach children about different kinds of meaning and to give them practice in recognizing literal, inferential, and personal meaning.
1. To make students aware of three kinds of meaning that can be constructed while reading.
2. To help students recognize the differences among literal, inferential, and personal meaning.

\section*{\(\square\) UNDERSTANDING THE METAPHOR}

It is difficult to illustrate ideas and how they are activated while reading so that young children understand the mental processes involved. On the poster, the three kinds of meaning are represented as three different lightbulbs. This metaphor capitalizes on a commonsense image of turning on a light in a person's mind when he/she has an idea. The lightbulbs are concrete analogies for "bright ideas." As they read, students can "turn on the meaning" by "flipping the switches" that help to illuminate their understanding of the passage. Each lightbulb is labeled literal, inferential, or personal. These are useful vocabulary words for children and will be taught directly. The poster shows three different switches that provide clues for creating each kind of idea. Students should ask themselves the following questions as they read:
- What do the words say? - literal meaning
- What does the message mean? - inferential meaning
- What do I think about it? - personal meaning

The lightbulbs are a handy metaphor for different kinds of ideas and form the basis for worksheets and class discussions.

\section*{\(\square\) DIRECT EXPLANATION}
1. Review the main goal of reading as searching for the treasure in each passage. Then ask, "Is there only one meaning to a passage or story?" Discuss how there can be more than one interpretation or more than one kind of meaning in a passage. Say, "Today we are going to discuss several kinds of meaning."
2. Direct students' attention to the poster and ask, "How is getting an idea like turning on a lightbulb in your mind?' Encourage a discussion of the metaphor that includes ideas such as:
- It lights up what I can't see very well.
- It's a bright idea.
- Things just click on.
- You see better when you get an idea.

Tell students, "There are three different kinds of lightbulbs on the poster, and we are going to learn how you can turn on meaning for each of them."
3. Point to the first lightbulb and select a student to read the first question, "What do the words say?" Tell students that readers sometimes do not understand the meaning because they do not understand the words. Explain that what the words actually say is one kind of meaning and it is called literal meaning.
4. Direct students' attention to the second lightbulb and select a student to read the question, "What does the message mean?' Explain to the class that sometimes the sentences mean more than just what the words say. Inferences are ideas suggested by the words. When readers tie these ideas together in a story with other things they know, they are constructing inferential meaning. Make sure that the students understand the word inference and know that inferential meaning is more than what the words say; it is the hidden meaning that they find in the reading.
5. Point to the third lightbulb on the poster and ask a student to read the question, "What do I think about it?" Explain to the class that stories can have special significance to people because the stories remind them of something that happened to them personally. Personal meaning includes feelings. Whether reading a newspaper, an advertisement, or a textbook, the information can mean different things to different people. \\ GUIDED STRATEGIC READING}
1. Ask students to turn to page 10 in their workbooks to the story entitled "Furry Fights." Direct them to read this passage silently so that they can answer questions about the kinds of meaning in it.

2. When students finish reading, direct their attention to the first lightbulb on the poster and say, "Let's find the literal meaning in this story." Ask questions such as the following:
- What were the boys' names?
- What kind of noise did the boys hear?
- What do dogs chase, according to Bryan?

Accept only correct answers and praise students who correctly turn on the literal lightbulb.
3. Next direct students' attention to the inferential meaning lightbulb and ask questions such as the following:
- Were Bryan and Nate neighbors?
- Did they argue a lot?
- What kind of pet is Muffy?
- Which boy probably has Blackie for a pet?

While asking students inferential questions, it is important to show them that the story never said these things exactly. Readers build the ideas from what the words say and other things they know in order to construct inferential meaning. Praise students for turning on the inferential meaning lightbulb.

\section*{Recognizing Three Kinds of Meaning}

\section*{Turning on the Meaning}


\section*{FOCUS}

The bridging lesson provides students with opportunities to apply strategies they have just learned. In this module, students will practice identifying literal, inferential, and personal meaning. Independent practice following guided strategic reading helps students transfer their knowledge and strategies to content arcas and recreational reading.

In this lesson, a worksheet showing three lightbulbs is provided to cue students to search for literal, inferential, and personal meaning. The worksheet can be assigned to accompany any independent reading. It is intended to help students interpret and evaluate meaning as they read.

OBJECTIVES
1. To provide students with independent practice in recognizing literal, inferential, and personal meaning.
2. To teach students to transfer their knowledge to new reading materials.

REVIEWING THE METAPHOR
Direct students' attention to the poster. Remind them of the three kinds of meaning shown in the lightbulbs. Say, "Today we are going to practice
4. Direct students' attention to the personal meaning lightbult) on the poster. Ask questions such as the following:
- Do you argue with any of your friends?
- Do you prefer cats or dogs?
- Do you know any pets named Blackic or Muffy?
5. Conclude this part of the lesson by pointing out to students that readers can often find all three kinds of meaning in what they read. Even this simple story had literal, inferential, and personal meaning. Remind students to look for all three kinds as they read.


\section*{Literal Questions}
6. For further practice in recognizing three kinds of meaning, ask students to turn to page 11 in their workbooks to the story "The Big One Didn't Get Away." Tell the students to read the story and fill in the lightbulbs at the bottom of the page. Each lightbulb is labeled literal, inferential, or personal, and students are to write examples of each kind of meaning in each lightbulb. Encourage them to write one example of each kind of meaning, not every idea in the selection. As an alternative, this passage can be read orally as a group exercise and questions about each kind of meaning can be asked of the whole group. The following questions are provided as guidelines for teachers who choose this option:
- What was the name of the lake?
- What did Dad like to use for bait?
- What did the bass do?

\section*{Inferential Questions}
- How do you know that this story is about a camping vacation?
- Does Susie have a brother?
- Did Susie catch the fish? How can you tell?

\section*{Personal Questions}
- Do you like camping and fishing?
- Can girls catch fish as easily as boys?
- How would you feel if you caught a big fish?
7. If students read the passage silently, discuss the answers they gave in their workbooks. Call on different students to read their examples of each kind of meaning. Correct any errors and praise good answers. You may wish to record students' answers on the chalkboard in three big lightbulbs
In this lesson children were taught to identify beginnings, actions, and outcomes of stories. They also practiced identifying cluc words and practiced putting sentences into proper temporal order. They learned that the sequence of events helps to organize ideas and to hold the passage together.
\(\square\) SPECIFIC FEEDBACK TO STUDENTS
1. Ask, "How are stories organized?" Encourage a discussion that focuses on beginnings, actions, and outcomes as a schema for story sequences.
2. Ask, "What are good clue words, and what do they do?" Encourage a discussion that focuses on words such as before, after, then, and next that identify the order of events in a story.
3. Ask, "Why is it important to try to link ideas in their proper sequence?" Students should recognize that ideas are combined in a specific order, otherwise they don't make sense, and the passage won't be understood.
4. Praise students for linking ideas and identifying the correct sequences.
finding literal, inferential, and personal meaning. It is important for you to ask yourselves the questions under the light switches as you read, so that you can turn on the meaning yourselves."

\section*{PROCEDURE}
1. Ask students to turn their workbooks to page 19 to the three light bulbs. Explain that their task is to fill in examples of literal, inferential, and personal meaning in each lightbull).
2. Assign independent reading; then have students fill in the information at the top of the worksheet. Explain to pupils that they should read the passage and fill in their ideas in the appropriate lightbulbs. Students may have to read the passage more than once and think about the meaning before they write their answers.
3. Optional Exercise: Students can make oral reports or turn in their worksheets, but it is important to check that students completed the assignment correctly.
4. Optional Exercise: The bridging lesson can be conducted in small groups. Have teams of three to five students read the same material and then fill in the worksheets as a joint project. Discussion among students can help them identify different ideas and show them how readers construct many kinds of meaning.

\section*{- SUMMARY}

This lesson provided students with practice constructing three kinds of meaning from independent reading material. Students were taught the three kinds of meaning and how they differ. They learned that each kind of meaning is particularly important for different kinds of text.

\section*{SPECIFIC FEEDBACK TO STUDENTS}
1. When students complete the independent assignments, provide feedback to them. For example, ask some students to give oral reports about the ideas they filled in for each lightbulb.
2. Ask, "Which kind of meaning do you think is most important for this selection?" Discuss why one type of meaning may be most appropriate.
3. Ask, "Did filling in the lightbulbs help you think about the information in the text? Is that a useful thing to do?' Discuss with students the value of thinking about different kinds of meaning as they read.

\section*{LESSON \\ 21 \\ Turning on the Meaning}

\section*{Recognizing Three Kinds of Meaning}

\section*{Turning on the Meaning}


\section*{FOCUS}

Literal, inferential, and personal meaning can be constructed from any type of reading material. In the first lesson, children were shown the differences among the three kinds of meaning in passages of fiction. However, children need to learn more than the labels for three kinds of meaning. Good students understand how different types of text emphasize one kind of meaning more than another. For example, poetry usually emphasizes personal meaning, science lessons focus on literal meaning, and mystery stories usually require readers to infer missing information. In this lesson, children will be taught how to recognize three kinds of meaning in various types of text and how to adjust their reading goals accordingly.

Students will learn that content and format provide clues about the primary type of meaning found in various text materials. This lesson is a good vehicle for introducing or reinforcing differences between fiction and nonfiction. Children will learn that some forms of fiction describe fantasy or fanciful stories and thus emphasize personal meaning. The reading materials include distinctive text genres to highlight the differences among the kinds of meaning that are emphasized in different types of reading.

\section*{\(\square\) OBJECTIVES}
1. To provide students with practice in identifying literal, inferential, and personal meaning.
2. To help students adjust comprehension goals and the search for meaning according to the type of reading material.

\section*{REVIEWING THE METAPHOR}

Direct students' attention to the poster and ask, "How is reading like turning on a lightbult in your mind?" Point out that the three kinds of meaning can be found in any reading material, but that some typès of material emphasize one kind of meaning more than another. Ask students for examples that emphasize primarily literal, inferential, or personal meaning. Encourage a discussion that identifies different forms of text. For example. a stop sign emphasizes literal meaning and a letter between friends emphasizes personal meaning. Point out the three kinds of meaning again and explain how students can turn on different ideas from various kinds of reading material.

\section*{- DIRECT EXPLANATION}
1. Ask children to help you make a list of different kinds of reading. For example, poctry, stories, magazine articles, science lessons, mysteries, comics, fairy tales, and so forth. Encourage as many answers as possible, and then use the list to distinguish fact from fiction. Explain that fiction is a make-believe story that is not true. Nonfiction describes true facts, places, people, and events. Using the list that the children generate, encourage a discussion about the three kinds of meaning and whether they are all equally important in each type of material. You may wish to use the following example to discuss literal meaning.
"If I left a message for Joc (or another child in the classroom) to go to the store and buy a dozen eggs and a loaf of bread, which kind of meaning must Joe get from the note?"

Stress that the meaning of the passage is mostly-1iteral. Joe must do just what the note says. He can't use his imagination go beyond the words; he must get the things on the note. That is the sort of reading you must do when you read directions, take information from the chalkboard, and so on. Encourage pupils to name other types of reading that contain mostly literal meaning.
2. As a contrast, use a different example to illustrate inferential and personal meaning, such as a verse from the "Star Spangled Banner."
"Oh say can you see
By the dawn's early light
What so proudly we hailed
At the twilight's last gleaming"
Ask students about the personal and inferential meaning of the song. Conclude this part of the lesson by encouraging students to recognize the type of reading material as a way of understanding what kind of meaning they need to turn on. Explain that knowing something about the passage helps guide their search for ideas.

\section*{- GUIDED STRATEGIC READING}
1. Direct students to turn their workbooks to page 14 to the advertisement entitled, "California Raisins: Nature's Candy."


Ask a student to read the advertisement aloud. When the student has finished ask, "What kind of reading is this? Is it fiction or fact?" Ask students to identify the different kinds of meaning in the passage and to fill in the ideas in the lightbulbs at the bottom of the page. The following questions may serve as guidelines:
- What do the words say about raisins? (literal meaning) [good snack, no preservatives, chewy and sweet]
- Why are they saying these things about raisins? (inferential meaning) [They want you to buy raisins.]
- Who is this advertisement for? (inferential meaning) |parents, adults]
- Would you buy the product? (personal meaning)
After students fill in their ideas, have them discuss their answers. Then ask, "What do you think is the most important kind of meaning for this type of reading material?" Suggest that it is probably personal meaning, because the advertisers are trying to get people to buy their product. Ask students if after reading this selection they thought about how good raisins are. If they did, the authors were successful in turning on personal meaning about raisins.
2. Direct students to page 15 in
 their workbooks to the passage entitled, "'Two Kinds of Pandas." This passage can be read silently or aloud as a group exercise. After students read the passage, ask them to fill in the three kinds of ideas in the lightbulbs at the side of the page. Again, it is important that students identify one good example of literal, inferential, and personal meaning. They do not have to write every idea in the lightbulbs.
3. When students have finished reading and have completed their worksheets, discuss the answers as a group. Have students read their ideas aloud and ask if other students had similar ideas. Make sure the discussion focuses on the similarity of literal meaning and the rich diversity of inferential and personal meaning that different readers have obtained.

In this lesson students were shown how different types of text emphasize different kinds of meaning. They developed a list of various types of reading materials and identified the differences between fact and fiction. Finally, by reading different passages and constructing literal, inferential, and personal meaning, students practiced searching for ideas with less guidance from the teacher. The importance of providing direct explanations when children are first presented a strategy and then lessening the guidance as children practice using the strategies was emphasized.
\(\square\) SPECIFIC FEEDBACK TO STUDENTS
1. Ask, "What are some different kinds of reading material?" Have students list some of the things they mentioned before.
2. Ask, "How do we alter our search for ideas depending on the kind of reading material we have?" Make sure that students understand that different types of texts emphasize different kinds of ideas.

Conclude the lesson by emphasizing that students should search for literal, inferential, and personal meaning whenever they read, but that they should pay particular attention to the kind of text and the primary meaning that they should construct. If they are aware of the kinds of ideas that are most important for different kinds of text, they will turn on the meaning and understand more thoroughly what they read.

\section*{INDEPENDENT EXERCISE}

The activity located on pages \(16-18\) of the. Workbook is designed for independent or group learning. Before the students complete the exercises, be sure to again focus attention on the poster and the strategies. Explain the purpose of the strategies, then have students apply what they have learned.


\section*{LESSON}

\section*{Understanding Ambiguity and Inferences}


FOCUS
The purpose of this module is to teach children the difference between explicit and implicit meaning in text. The definition of inferential meaning is elaborated on and illustrated with examples of ambiguous sentences, jokes, and figurative language. This lesson is designed to make inferential meaning concrete for children so that they search for hidden meanings as they read. Humorous materials such as jokes, puns, and riddles illustrate the difference between literal and inferential meaning in a striking fashion. They are fun to read and provide their own motivation for inferential thinking. Proverbs may be less amusing, but they provide another good example of how literal and inferential meaning can differ. In fact, the literal meaning of many proverbs doesn't make much sense, and it is necessary to find the hidden meaning in order to understand them.

What about inferences? Inferences are the ideas that are the result of thinking about text. Inferences add new information that is not actually stated. Inferences help students resolve ambiguous meanings of words and help them comprehend figurative language such as similes and metaphors. Because the idea of an inference is difficult for children to grasp, the words infer and inference are used in the lessons and many examples of each are given. Children are taught this level of meaning and the mental effort required to make inferences.

Turning on the Meaning


\section*{Find the Hidden Meaning}


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