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# **Information Literacy Instruction for Kuwaiti Students and the Role of Cultural Relevance**

by

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A Doctoral Thesis

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of

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

IN THE NAME OF GOD, THE COMPASSIONATE, THE MERCIFUL

*Glory to You! We have no knowledge except what you have taught us.  
Indeed, it is You who is the Knowing, the Wise.*  
(THE QURAN TRANSLATED, 2:32)

## **Dedication**

This work is dedicated to the worldwide Muslim community  
with hope for educational reform and with faith in its greatest potential  
under the full application of Islamic teachings.



## Abstract

This study identifies the components of an instructional programme for information literacy that is culturally relevant to Kuwaiti students. It discusses culturally relevant education, instruction for information literacy, the provision of library and information skills instruction in Kuwait, and its characteristics as an independent nation, and as a Gulf, Arab, Islamic, and developing country.

The study further tests the effect of cultural relevance on instruction for information literacy for Kuwaiti students with an experiment of comparative instruction. The control group received Western-oriented instruction for information literacy and the experimental group received instruction that substituted Kuwaiti cultural referents for some of the Western-oriented referents. The aims of instruction for both groups were basic levels of proficiency as described in *Information Literacy Standards for Student Learning*, and the main vehicle of instruction was the Big Six™ information problem solving strategy. The only difference in instruction between groups were the images in the Big Six™ transparencies used for overhead projection, the examples used in class to discuss various information problems and the corresponding images that represented the examples.

The study measured the information problem solving achievement of 126 fourth- and eighth grade students with a pre- post-test, the recall of the Big Six strategy with a post-test, and student attitudes with a questionnaire. The analyses revealed that, overall, there is a significant difference in the mean achievement scores in information problem solving and the recall of the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant. Examined separately, males' scores were significantly higher in the group that received culturally relevant instruction, while females responded equally well to both types of instruction. In addition, the study found a strong correlation between the attitudes of students in the control and experimental groups, and between males and females within groups.

**Keywords:** information literacy, culturally relevant education, Kuwait, sex differences, information skills, relevance (cultural), Middle Eastern studies, foreign culture – Kuwait.

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# **Chapter One**

## **Introduction**

### **Education in Kuwait**

Education, as one of the basic human rights set out by the United Nations, is a means to overcome ignorance, improve the quality of life and supply an adequate number of sufficiently trained people to achieve national socio-economic independence. Since 1960 there has been increasing recognition of the importance of education in the successful innovation and development of the Arabian Gulf region that has resulted in an appreciable expansion in all categories and levels of education throughout the region and considerable increase in education budgets.

Like many Arab countries in the recent past, Kuwait has experienced rapid economic growth due to its oil wealth discovered in 1938. Since Kuwait began exporting oil in 1946, the government of Kuwait has invested this wealth in many fields, education being a priority throughout. In 1937 there were 740 students registered at local schools; by 1999 there were 930 schools servicing 425,000 students<sup>1</sup> and two institutes of higher education serving 40,000 students.<sup>2</sup> The state's budget for education steadily rose from six million Kuwaiti dinars (KD), or approximately three million sterling, in 1955, to 478 million KD in 1995.<sup>3</sup>

The evolution of education in the past four decades has shown increased attention to both quantitative and qualitative aspects of education at its various levels. However, education in Kuwait is still highly traditional at all levels in the sense that memorisation and the rote learning of facts are central to the learning process.<sup>4</sup>

Asheim's description of education and the role of books in developing countries twenty years ago unfortunately still applies to the situation in Kuwait today:

The system of education in most of the developing countries places emphasis upon unquestioning acceptance of professional authority, and that means that books have very little part to play in the process. The lecture notes and the single textbook suffice to see the student through most of his academic career, and everything about the system tends to discourage rather than encourage the habit of reading. The texts are dull and uninviting, outside



reading, if it leads to independent ideas or ideas in conflict with the class lectures, will jeopardize the student's chance to move ahead. Since advancement is based absolutely on examinations along the ladder from elementary school to advanced study in the university, since the examinations are designed to test the student's rote memory of the lectures rather than his knowledge of the subject... it is the unusual student indeed who would be motivated to use the library for any other purpose than a space in which to cram for examination.<sup>5</sup>

In Kuwait, textbooks are chosen for all Arabic schools by the Ministry of Education, most of them being written by the same Ministry. Teachers are expected to follow a very structured schedule in the presentation of material, which is usually in the form of lectures. Instruction is based on lectures even in the primary levels and textbooks are not only often outdated, but they also fail to stimulate the spirit of inquiry, creativity and initiative in the students.

Like the educational systems in many developing countries, that in Kuwait is often criticised by professionals, educators and students themselves, especially with reference to the curricula and teaching methods. Educational authorities are also blamed by citizens for employing a high percentage of non-Kuwaiti teachers, which leads to a variety of cultural and educational backgrounds, non-standardised teaching methods, and a high turnover rate among teachers.<sup>6</sup>

In response to the dissatisfaction with public education in Kuwait, English-language schooling is a fast-expanding phenomenon of contemporary Kuwait. Many foreign schools have opened recently, offering more diverse curricula, up-to-date and varied material, more highly trained teachers, and the materials and programmes to support the curricula such as better libraries and computer laboratories. The schools are high prestige institutions in constant demand, although they differ in goals, philosophy, and the type and quality of education provided.

Since the liberation of Kuwait from Iraqi occupation in 1991, the number of foreign schools has increased at a rate ten times that of pre-occupation Kuwait.<sup>7</sup> Investment in English-medium education may be seen as a cornerstone of economic reconstruction. Tickoo asserts that "as the world's richest source of current

knowledge, the English language is and may for long remain the most accessible gateway to growth.”<sup>8</sup> With growing participation in information technology and through increased international travel and trade, Kuwaiti citizens are open to outside influences. A growing number of Kuwaiti parents value an education that prepares their children to participate in their community, across international borders and within the global community. Kennedy explains the post-war trend as follows:

According to educationalists, there is a marked preference among Kuwaitis for a Western education which is due to several factors. These factors include the perceived inadequacy of state education, the importance of an English language education as a preparation for further education overseas and life in general, and the advanced curriculae of the non-Arabic foreign schools in Kuwait. Despite the comparatively very high fees, schools that teach American, British and French curriculae are booming.<sup>9</sup>

The number of foreign schools in Kuwait rose from 23 in the 1989/90 academic year to 48 in 1998/99 and the number of Kuwaiti students attending foreign schools more than tripled during this period.<sup>10</sup>

Hence, there are basically two types of education in Kuwait: the traditional, government-sponsored education, which depends primarily on lectures and memorisation, and the foreign education which is often based on western curricula and methods. While there is diversity of education in Kuwait, both approaches mentioned are weak in respect to preparing the local population for the challenges of their own developing country in a way that reflects the cultural characteristics of society. The traditional Arabic education fails to teach critical thinking, creativity, problem-solving and the initiative that is required for development in third world countries. On the other hand, foreign education increases the students' opportunities in our global information-based society, but many of them are not academically prepared to face the particular challenges of their own developing country. In this case, there is a gap between their education, which was formulated in industrialised countries, and the characteristics and needs of their own developing country. Al-Othaimen purports that

... if the educational system is to succeed in developing countries it has to rely on the cultural conditioning of the people, firstly to enable them to understand the civilization of the past; secondly to take part in the civilization of the



present; and finally to create the civilization of the future. Thus, education cannot be imported; it must be of society's own making.<sup>11</sup>

Since education is regarded as an important developmental tool, it must be structured to meet the needs of each particular society. Its content must be responsive to the needs of the society and its methods appropriate to the characteristics of the learners. Education, particularly that in developing countries, should be "closely allied to the culture from which it grows, and to which it contributes as a steadily modifying and shaping force."<sup>12</sup> Education should address the specific culture, language and problems of the society in a realistic way and train youth to overcome the obstacles in the way of development. It should train students to ask questions, find information, formulate answers and communicate their findings if any fundamental change is to occur. In short, students of developing countries need education that is relevant to their own experience and their own development, yet provides training to function competently in the global society, of which they are increasingly a part due to the advances in telecommunications, networking and international cooperation. Most importantly, education must achieve self-motivated life-long learning in students so that they can contribute effectively to the continued development of their societies.

### **Information Literacy**

Perhaps the first step in raising the quality of education is to define its purpose. It should not be limited to academic pursuits but should focus on the ability to find and use information effectively for a variety of purposes within both the local and wider communities. Information literacy, or the ability to access information efficiently and effectively, evaluate information critically and competently, and use information accurately and creatively,<sup>13</sup> is fundamental for success in our rapidly changing, information-oriented world. Craver states that in the light of technological, economic and employment trends,

information literacy will be an essential survival skill in the twenty-first century. To achieve a higher degree of information literacy... our children will need to improve their abilities to (1) acquire appropriate information, (2)



organize and apply it at relevant times, and (3) use information effectively with others. The ability to acquire appropriate information involves reading, study skills, reference, and information-search proficiencies and an understanding of on-line information concepts. Being able to organize and apply information on relevant occasions entails thinking skills that necessitate classifying, interpreting, analyzing, summarizing, synthesizing and evaluating information. Using the information to adopt a well-reasoned strategy is also essential. Developing competency in employing information effectively with others requires fostering of cooperative skills in group settings. The abilities to persuade, debate, contribute to and negotiate with others by using facts, logical arguments, and information is considered critical to the furtherance of a democratic society.<sup>14</sup>

Although the statement refers to the perceived needs of American students, the challenges facing the educational systems in developing countries to foster information literacy is particularly applicable. In order for change and development in the third world to take place, instruction for information literacy that considers both the culture and developmental needs of society must receive due consideration in the educational process.

If education is to be used to develop, maintain and strengthen a stable productive society, a strong programme to foster information literacy is essential. Didlier concluded that instructional programmes for information literacy contribute to the “development of reading skills, overall academic achievement, library skills, vocabulary and word study skills, verbal expression, problem-solving ability, and breath and quality of general reading.”<sup>15</sup> A study by Lance showed that a well-equipped library media centre and a library media specialist that provided access and a programme of services was the most significant factor on student achievement.<sup>16</sup>

A school library media programme that offers instruction for information literacy expands the boundaries of learning which may be limited by textbooks, allows students to explore current, controversial or local issues not included in the textbook, and to study more fully topics covered only briefly in the texts. A strong information literacy programme in schools would offer students the opportunity to develop an understanding of library resources and services that go well beyond local services and holdings to universal access to information, knowledge and cultures, regardless of where the resources or the user are physically located.

## **Statement of the Problem**

The effective role of Kuwaiti youth in the development of their country will depend, to a large extent, on their ability to function in a global community increasingly dependent on the availability of current information and communication networks. Information literacy has become essential for students of the 21<sup>st</sup> century. In order for students to acquire the information management skills necessary to meet the challenges of the future, education and training should start early and continue throughout the school years and beyond.

However, education in Kuwait is highly traditional in the sense that a single textbook, lectures and examinations characterise it from its primary stages. The role of the library in public education is very limited, and many students have never used the library for anything but assigned reading. Resources are usually limited to print sources, and the role of the librarian is highly traditional, with strong management, instructional and consultative roles uncommon among librarians.

A number of private English-medium schools in Kuwait provide an alternative to public education. They offer a considerable variety of library provision and services; some offer as little as the Arabic schools, while others boast of large collections, information technology and the provision of some library skills instruction. However, there is often a cultural gap for Kuwaiti students attending foreign schools since the curricula of these schools are imported and adopted with little or no adaptation to local circumstances or needs.

Within both public and private education, there is inconsistency and incohesiveness in instruction for information literacy. No school in Kuwait offers a comprehensive programme at all levels to build information literacy in students from their elementary years. In the schools that do offer some sort of library, information or research instruction, the availability of relevant instructional material for Kuwaiti students is severely limited.



## **Purpose of the Study**

In response to the inadequacies of both public and private schools with regard to instruction for information literacy, this study has been undertaken to define culturally relevant education, determine the most recent developments in instruction for information literacy, and examine the culture of Kuwait and issues that may be significant in an indigenous instructional programme for information literacy. In addition, this study aims to test the following hypothesis:

*Instruction for information literacy that is culturally relevant elicits a higher learning response in Kuwaiti youth as opposed to instruction with identical general aims that is not culturally relevant.*

It is hoped that this study will also provide a foundation for improved school library media programmes and general education throughout the country.

## **Definition of Terms**

The terms “library skills,” “information skills” and “research skills” have been used throughout the literature to indicate what the researcher believes are components of information literacy. The term “information literacy” is used in this study to refer to the knowledge, skills and attitudes important to access, evaluate, use and communicate information effectively. Likewise, the terms “library instruction,” “information skills instruction” and “bibliographic instruction” are used in the literature to indicate what the researcher believes are components of instruction for information literacy. Therefore, the term, “instruction for information literacy” is used by the researcher to refer to instruction planned and implemented by school library media specialists to teach information literacy to school students.

## **Scope and Limitations**

1. Although world-wide trends and models for information literacy instruction are used as a basis for the field research, this study is not intended to be a comprehensive review or a definitive study of information literacy for students.

2. Although in Kuwait a child's nationality is determined by the father's nationality, the children who participated in the present study are considered Kuwaiti by the researcher if at least one of the parents is Kuwaiti.
3. The results of this study apply only to Kuwaiti students in English-medium schools. General applicability may or may not exist for other populations of learners.

### **Objectives of the Study**

1. To define culturally relevant education.
2. To provide a conceptual framework for culturally relevant education for Kuwaiti youth.
3. To assess the current best practice of instruction for information literacy.
4. To review instruction for information literacy offered in the various educational levels in Kuwait.
5. To determine if instruction for information literacy that is culturally relevant elicits a higher learning response in Kuwaiti children as opposed to instruction that is not culturally relevant.
6. To provide a basis for developing instruction for information literacy in Kuwait.
7. To provide a basis for recommending changes within general education in Kuwait.

### **Methodology of the Study**

With the objectives of the study in mind, the researcher designed an overall research strategy that led to the realisation of the research objectives. The components of this strategy, which are explained in detail below, included:

1. Having teaching experiences with Kuwaiti students in a school setting
2. Surveying the nature of current information literacy instruction in schools in Kuwait

3. Reviewing the literature pertaining to culturally relevant education, instruction for information literacy and Kuwaiti culture
4. Selecting a suitable research methodology to test the hypothesis put forth in the Purpose of the Study
5. Selecting a site for comparative instruction, the populations to be included in the instruction, and the duration of the course
6. Formulating a curriculum, complete with instructional objectives, classroom procedures, instructional material and assessment tools, to use as the basis of comparative instruction
7. Identifying components of a curriculum that could be classified as Western-oriented or Kuwaiti-oriented
8. Selecting appropriate methods to measure the outcomes of the different approaches to instruction

In preparation for this study, the researcher accepted a post as librarian at an English-medium school with a high population of Kuwaiti students. The researcher had regular contact with several hundred students in kindergarten, elementary and middle school (ages 4-14 years) for one year, which provided insight into the experience, abilities and attitudes of Kuwaiti students. In addition, the researcher was permitted to teach library and information skills to students in middle school (ages 10-14 years), which provided knowledge of the students' level of information literacy and attitudes towards instruction for information literacy. The knowledge gained from this experience enabled the researcher to better identify the components of culturally relevant instructional units that would be effective for Kuwaiti students.

Also in preparation for this study, the researcher surveyed the nature of information literacy instruction currently offered in schools in Kuwait. Librarians at all English-medium schools in Kuwait were requested to fill a questionnaire about the library, information and/or research skills instruction that may be offered at their schools. In addition, the researcher determined the extent of instruction for information literacy that is offered in Arabic-medium schools as well as in institutes of higher education in Kuwait. This information provided an indication of the levels of information literacy proficiency that can be expected from Kuwaiti citizens from varying educational backgrounds.



As a necessary component of this study, a literature review was conducted to define instruction for information literacy, culturally relevant education and Kuwaiti culture. The evolution of instruction for information literacy was examined to determine the current best practice in that area, and factors that contribute to a successful programme of instruction for information literacy in schools were discussed. The literature on culturally relevant education was also reviewed, in light of culture and culture in education, to identify its components and understand its effect on student achievement. In addition, the literature on the culture of Kuwait was reviewed to enable the researcher to identify subject matter that may be relevant to Kuwaiti students. The topics reviewed ranged from the broad challenges that face developing countries like Kuwait to some specific features of Kuwaiti family life.

Having completed the preliminary research, a study of research methodology in the social sciences was undertaken to enable the researcher to select a suitable procedure to test the hypothesis that instruction that is culturally relevant elicits a higher learning response than that which is not culturally relevant. Qualitative studies, which are often used in educational settings, address behaviours that occur in a natural setting; researchers study phenomena while trying not to disturb the normal course of events or introduce treatments. This type of study is useful for describing complex personal and interpersonal phenomena in context. In this holistic approach, research problems are humanised and testing procedures are usually not intrusive. Quantitative studies describe behaviours with measures or statistics and determine cause and effect relationships. They employ deductive logic and feature tightly designed and controlled experiments to validate an explanation and demonstrate relationships.

Believing that the research question to be answered determines the method employed, the researcher chose a quantitative approach to this study. With this approach, information can be collected efficiently, and analysis yields precise measures of causal relationships. The researcher utilised an experimental design of comparative instruction, whereby an experimental group received different treatment (i.e., culturally relevant instruction) than the control group. This approach was chosen for two main reasons, the first being a lack of suitable contexts in which to observe

students. Not only are programmes of information literacy incomplete in Kuwait, but also culturally relevant material is largely lacking. The second reason a quantitative approach was employed is due to the fact that the educational system in Kuwait is based largely on examinations and test results, the researcher feels that the statistical measures of the differences in achievement between the control and experimental groups may have a greater impact on policy-makers at the present time than the qualitative outcomes that may have been generated otherwise.

After selecting the type of experiment that would be implemented to test the hypothesis, the researcher sought permission to conduct the study at the English-medium school with the highest ratio of Kuwaiti students in Kuwait. Initially, permission was granted to teach library skills to fourth grade students (ages 9-11) for one semester. However, the researcher felt that two age groups would increase the external validity of the study and, for that reason, was granted permission to extend the study to eighth grade students (ages 13-15) as well. The fact that the students in the eight classrooms that participated in the study were segregated by gender offered additional opportunities for data analysis.

The objectives of the instruction for information literacy that became the focus of the experiment were derived from the three standards of information literacy for student learning published by the American Association of School Libraries and the Association of Educational and Communications Technology in 1998. The indicators of either basic or proficient levels of proficiency, as described in their document, *Information Literacy Standards for Student Learning*,<sup>17</sup> provided the basis for both instruction and the assessment tools. Furthermore, the Big Six<sup>TM</sup> information problem solving strategy<sup>18</sup> was utilised as a vehicle of instruction. As perhaps the most widely known approach to teaching information and technology skills in schools, the Big Six strategy was chosen for its simplicity, for its adaptability to a variety of information problems rather than only to research papers and reports, and because of the graphical presentation offered by its developers. The information literacy standards and the Big Six approach to problem solving were chosen for their reputation internationally and for their adaptability to local circumstances. The combination of the performance standards and the Big Six approach, therefore,



provided a broad and solid foundation for the syllabi used in the field study of comparative instruction for Kuwaiti students.

Having chosen the bases of the curriculum, the researcher formulated lesson plans to teach basic levels of information literacy as indicated in the standards for student learning. Instructional objectives were outlined and assessment tools were created based on the objectives; these included a test to measure information problem solving ability, a test to measure recall of the Big Six strategy, and a questionnaire to measure student attitudes toward instruction. In addition, minute by minute teaching plans were constructed and visual aids were created in the form of transparencies for overhead projection. The researcher consulted the students' textbooks to determine what subject matter would be familiar to them for the contexts of solving information problems.

Having formulated the basic content of classroom instruction at both the fourth and eighth grade levels, the researcher inserted into the syllabi examples, texts or visual aids that were either Western-oriented or Kuwaiti-oriented. Great care was taken to ensure that the students had similar familiarity to the cultural referents presented. Furthermore, the extensive use of transparencies enabled the researcher to insure, as much as possible, equivalent instruction to both groups, the only difference being the cultural referents used as examples during instruction and presented via transparencies.

At the conclusion of instruction, students were tested with regard to their achievement in information problem solving ability, recall of the Big Six strategy and their attitudes towards the instruction, the Big Six and the classroom material. The researcher selected three statistical methods to measure the outcomes of the different approaches to instruction. Analysis of variance (ANOVA) was used to measure the variance of the dependent variables, i.e. the tests used to measure students' information problem solving ability and recall of the Big Six strategy. While this alone provides a reliable indication of a hypothesis' validity, the researcher also administered independent samples *t*-tests for equality of means to provide a more in-depth analysis of variance between populations. The *t*-tests were applied to various pairs of independent groups, i.e. groups classified by gender, grade



level, type of instruction, or combinations thereof, to test for statistically significant differences between the means of test scores among paired groups. Finally, chi-square tests were used to analyse the frequency counts generated from the questionnaires designed to measure student attitudes towards instruction.

Based on the researchers' experience with Kuwaiti students, the survey of instruction for information literacy in Kuwait, the review of literature pertaining to culturally relevant education, instruction for information literacy and Kuwaiti culture, and the results of the experiment of comparative instruction, the final conclusions were drawn, as well as recommendations for further research.

### **Organisation of the Study**

The study is organised into nine chapters. Chapter One provides background information and describes the purpose of the study. It states the problem to be addressed, explains the purpose of the study, and presents the study objectives and other information about the context of the research.

Chapter Two describes the evolution of instruction for information literacy with respect to both content and method. The content of early instruction in the field focused on the location and use of specific library sources; this has evolved to focus on the processes involved in solving information-related problems of any type. Methods of instruction changed from being taught in isolation to the more modern approach of integrating instruction for information literacy into the mainstream curriculum of the school. Chapter Two also reviews some of the factors that affect the provision of library instruction in schools such as funding, the availability of appropriate staff and the support of school personnel and community members.

In Chapter Three, culture in education is reviewed and the inseparability of culture from education established. The current trends in education toward culturally responsive curricula are explored, and the goals and methods of five main approaches to culture in education are defined: teaching the culturally different, the human relations approach, single group studies, multicultural education, and

multicultural education that is also social reconstructionist. In addition, what is termed “culturally relevant education” is discussed. Although it only recently has appeared in the literature, it is the most natural method and historically common approach to education in the sense that it uses the students’ culture to help them create meaning and understand the world. The components of culturally relevant education are discussed in detail; they include the social and historical contexts, the teacher, the student, the classroom culture and the instructional materials.

Chapter Four focuses on the characteristics of Kuwait on several levels, namely, as a nation in its own right, as a Gulf country, as an Arab country, as a Muslim country and as a developing country. It reviews some of the general issues that may be relevant to the provision of libraries and instruction for information literacy for Kuwaiti students and that address their unique characteristics and needs.

Chapter Five describes the types and numbers of libraries in Kuwait and summarises the challenges that face the rapidly changing field of library and information science in Kuwait. For an overview of Kuwaiti students’ experience in libraries and exposure to instruction for information literacy, it also examines the provision of instruction for information literacy in English-medium schools, Arabic schools, and higher education.

Chapter Six describes the characteristics of a culturally relevant instructional programme for information literacy for Kuwaiti students. It discusses the foundations of the curriculum designed for the field research and includes detailed lesson plans and supporting material used to test the hypothesis put forth in this chapter. The assessment tools used to measure student achievement and attitudes are also presented.

Chapter Seven presents the research methodology of the field study. It details the hypotheses to be tested, discusses instrumentation and the pilot study, and explains the procedures used to score and analyse students’ responses. Chapter Eight presents the data analyses and Chapter Nine summarises the study and provides general conclusions and recommendations.



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- <sup>10</sup> *Ibid.*
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- <sup>12</sup> *Ibid.*, p. 4.
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<sup>17</sup> **AASL and AECT**, ref. 13.

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## Chapter Two

### Instruction for Information Literacy

#### Introduction

The concept of school libraries dates as far back as ancient Athens, when secondary school students annually gave one hundred books to the school library as a gift. Very early religious schools often had libraries in them, such as the mosque-schools in the Middle East and monasteries in Europe. One of the earliest conceptions of the school library as a centre for both print and non-print media was recorded in the Ashton Ordinance of 1578, which prescribed “all manner of books, mappes, spheres, instruments of astronomye and all other things apperteyninge to learning...”<sup>1</sup> While visionaries throughout time have promoted the idea of well-stocked libraries and various programmes of library service and instruction in schools, there has remained considerable diversity in library provision.

It was not until the 20<sup>th</sup> century that widespread school library development began to gain impetus. In 1914 the School Library Section of the American Library Association was formed, followed by the formation of the School Library Association in 1936 in the UK. In the early 1900s various qualitative and quantitative standards were developed for school libraries, print resources, and library services for children, youth and school faculty, but they were not given national status until standards were adopted by the American Library Association (ALA) in 1920.<sup>2</sup> Nation-wide policies and published standards in 1945 (USA) and 1970 (UK) paved the way for school library progress around the world. *School Libraries for Today and Tomorrow* was published by the ALA in 1945, and updated, revised standards in were subsequently published in 1960, 1969, 1975, 1988 and 1998. In the UK, *School Library Resource Centres: Recommended Standards for Policy and Provision* was published in 1970 by the Library Association, followed by a supplement in 1972 for non-book materials; these two documents were reprinted in one volume in 1973. A complete reworking and updating was published in 1977, entitled *Library Resource Provision in Schools: Guidelines and Recommendations*.



On the international level, the concept of the role and structure of the school library media centre was detailed in UNESCO's Manifesto for School Libraries in 1981,<sup>3</sup> which "proclaims that school library media services are essential to effective education for all children and adolescents."<sup>4</sup> It specifies the types of service the school library should offer, including a programme "to equip students with the basic skills to obtain and use a wide range of resources and services [and] lead them towards a lifetime use of libraries for recreation, information and continuing education."<sup>5</sup> By this time, it was widely recognised that school librarians were responsible for teaching library and information skills to students.

School librarians have traditionally described their *raison d'être* as one of "promoting access to a broad range of information and ideas, in order to assist students in acquiring the knowledge, skills and attitudes necessary to function effectively in an information society."<sup>6</sup> A multitude of similar terms have been used to describe the process of educating library users, including:

- Bibliographic instruction
- Library orientation
- User education
- Library instruction
- Information skills instruction
- Education for information literacy
- Library user education
- Training in the use of the library

Any of these terms may be used to describe the "systematic nature of the effort to teach something – a set of principles or search strategies relating to the library, its collections or services – using predetermined methods in order to accomplish a predefined set of objectives."<sup>7</sup> Kirby, Liddiard and Moore<sup>8</sup> offer the term 'empowerment' to describe the process of providing library users with the necessary skills to find and exploit information that they need for work, study and leisure. They prefer this term to those listed above because it "describes the role of the information professional today, which is not simply to provide the information users

with instructions to carry out a specific task, but to help them find and develop a range of transferable skills that are essential in the *Information Age*.”<sup>9</sup>

During the past century, the school librarian’s role has developed to include one or more of the following responsibilities: organising and maintaining the school’s collection of books; providing access to information in a variety of media; working closely with teachers and students to select and produce all types of media for educational purposes; providing support and consultation in the total instructional program of the school; and providing instruction to help students and teachers become “information literate.” Today’s school librarian, through all of these roles, is expected to play a major role in information literacy for lifelong learning. This chapter examines the various approaches used by school librarians to teach information skills in a rapidly changing environment.

### **Early Library Skills Instruction**

Instruction in libraries in its early stages consisted of teaching students how to use the materials available on site. From the 1950s to the 1970s, many new school libraries were developed, especially with regard to facilities, staff and collections. Reflecting the communications revolution of the 1960s, which naturally affected education, school libraries were often renamed “school library media centres” and school librarians “media specialists.” Library skills instruction developed to help students use the new facilities and collections in various media.

During this time two main approaches to library skills instruction developed: the source approach and the pathfinder approach.<sup>10</sup> The source approach aimed to teach students how to locate and use particular sources; this approach was limited to the library’s physical collection. Most traditional, source-based library skills programmes focused on location and access skills, including the use of access tools, arrangement of material in the library, parts of a book, and strategies for searching the catalogue. These skills were usually taught by the librarian in isolation, often in rigidly scheduled programmes of instruction.

The pathfinder approach to library skills instruction provided a more conceptual basis for source-based instruction. This approach took a student, step by step, through a variety of sources to gather information on a particular topic using a model procedure that draws attention to the relationship between sources. A typical library pathfinder may consist of a definition of the topic, subject headings, frequently cited texts, call numbers, relevant reference works, bibliographies, abstracting and indexing periodicals, and titles of important periodicals relevant to the topic.<sup>11</sup> Every student used the pre-mapped plan in the same sequence. However, like the source approach, pathfinders were also limited to the library's physical collection. An example of a pathfinder appears on the following page in Figure 2.1.<sup>12</sup>



## Figure 2.1 Fairy Tales Pathfinder

Scope: The Encyclopedia Britannica defines the fairy tale (also wonder tale and sometimes just folktale or tale) as a pan-European popular fiction with aristocratic characters, magical episodes, and a symmetrical structure. While the terms are used interchangeably, fairy tale is used most commonly. The user need not have a large background in literature; only the interest in fairy tales from a critical, historical, and entertainment aspect. The bibliographies are representative collections of folk tales, fables, myths, and epics to be used in the classroom, library, and home.

An introduction to this topic appears in:

Encyclopedia Britannica. 15<sup>th</sup> ed., s.v. "Folk Literature," by Stith Thompson.

Books dealing with fairy tales are listed under the following subject headings:

Fairy tales  
Folk literature  
Myths and legends  
Fantasy literature  
Specific authors and countries, i.e., Brothers Grimm or Irish fairy tales

Texts that are frequently mentioned include:

Bettlehiem, Bruno. The Uses of Enchantment; The meaning and Importance or Fairy Tales. New York: Alfred A. Knopf, 1976. GR/550/.B47/1976

Franz, Marie L. Shadow and Evil in Fairy Tales. Zurich, Postfach 190: Spring Publications, 1974. GR/550/.F72

Other books are shelved under the call numbers:

GR.116	LB 1042	J398	GR 550
PN 3437	PZ 8	PN 1009	PN 931

Handbooks, encyclopedias and dictionaries that contain information on fairy tales include:

Cuddon, J. A. A Dictionary of Literary Terms. Garden City, NY: Doubleday, 1977. S.v. fairy tales Ref./PN/41/.C38/1977b.

Shipley, Joseph t. Dictionary of World Literary Terms. Boston: The Writer, Inc., 1970. S.v. fairy tales. Ref./qAE/.E363.

Bibliographies that are collections of Fairy tales:

Buck, Pearl. Fairy Tales of the Orient. New York: Simon & Schuster, 1965. PZ/8/.B865/Far

Hazeltine, Alice I. Hero Tales from Many Lands. Nashville: Abingdon Press, 1961. J393.2/H429h

Opie, Iona and peter Opie. The Classic Fairy tales. London: Oxford University Press, 1974. Case/j398/061c

Journal articles and other literature may be found in the guides listed:

Index to Fairy Tales, Myths and Legends. Ref./Z/5983/.F17/E2  
Education Index. Ref./Z/5813/E23  
Humanities Index. Ref./AI/3/.H8  
Library Literature. Ref./Z/666/.L69

The source and the pathfinder approaches were often taught without a subject context or a curricular framework, which limited the students' application of library or information skills to other research needs. Eisenberg offers the following analogy:

Teaching library and information skills independent from subject area curricula is like teaching auto mechanics students how to use certain tools one at a time and then expecting them to be able to use the appropriate tool in a specific situation (e.g., fixing a car).<sup>13</sup>

As Irving explains, "much instruction centered upon the library's holdings and arrangements rather than the pupil's tasks and needs. It was not simply an emphasis on instruction which *would* become relevant later on, but an emphasis in instruction which *might* be useful later on."<sup>14</sup> Oberman and Linton criticised the skill-based approach since "research is not a series of predetermined procedures; rather it is open-ended, involving problem solving and creative thinking."<sup>15</sup>

Both the source-based and pathfinder approaches are library dependent and lacking emphasis on thinking and reasoning skills, making unlikely the transference of newly-learned information skills to other information-seeking situations, or other libraries and their resources. Fielder and Huston warned that expecting students to locate bibliographically-controlled information through the library-finding tools recommended by librarians encouraged students "to remain passive consumers of experts' 'second-hand knowledge' through encouraging their dependency on librarians' professional expertise and their subsequent uncritical acceptance of library owned information."<sup>16</sup>

Although developments in the field of school librarianship have led to many improvements in instruction, many schools today adhere to these traditional, source-based and pathfinder approaches, as evidenced by regular postings on LM\_NET, an international library media discussion group accessed via the Internet. Miller and Anderson feel that a lack of sound data-driven research on the part of librarians contributes to this problem, as well as the fact that such lessons provide teachers with planning time or breaks and keep the library busy with visible work.<sup>17</sup>



The most positive outcome of early library skills instruction was the specification of instructional objectives related to library and information use. Many schools developed instructional objectives in behavioural terms so that student learning could be measured. The instructional objectives were carefully mapped in their scope and sequence and instructional strategies and assessment tools planned around them. There are numerous checklists or continuums of library skills in the literature,<sup>18</sup> especially on individual school's World Wide Web sites, and most suggest a grade level for teaching and reviewing the skills. One of the earliest checklists is presented in Figure 2.2 below, excerpted from the Ontario Ministry of Education's Partners in Action (1982).<sup>19</sup>

**Figure 2.2**  
**Teaching and Reviewing Library Skills**

Topic	Awareness	Mastery	Maintenance
<b>A. Library-Resource-Centre Orientation</b>			
1. Know location of LRC	K	1	2-13
2. Identify LRC personnel	K	1-2	3-13
3. Observe LRC rules and manners	K	1-2	3-13
4. Identify specific terms for LRC furniture	K	1-3	4-13
5. Check out own books(s)	K	1	2-13
6. Check out all other material	1	2-3	4-13
7. Know how to renew material	1	2	3-13
8. Identify areas of LRC	K-2	3-4	5-13
9. Identify kinds of media	K-2	3-4	5-13
10. Handle material properly	K-2	3-6	7-13
<b>B. Organization of Resources</b>			
1. Know the location and arrangement of the following:			
a. picture books	K	1	2-13
b. fiction books	2	3-5	6-13
c. non-fiction books	K-3	4-8	9-13
d. general reference material	1-3	4-9	10-13
e. audio-visual materials	K-3	4-10	11-13
f. periodicals	K-3	4-8	9-13
g. vertical-file material	3-4	5-10	11-13
h. specialized reference materials	3-10	9-12	13
i. periodical indexes	7-10	11-12	13

*continued*

Topic	Awareness	Mastery	Maintenance
2. Identify author, title, and subject cards in the card catalogue	3	4-8	9-13
3. Locate materials according to call number	1-3	4-8	9-13
C. Selection of Resources			
1. Distinguish between fiction and non-fiction	K-3	4-8	9-13
2. Select materials from resources outside the school	K-3	4-10	11-13
3. Use the card catalogue as a selection tool	3-6	7-8	9-13
4. Distinguish between Canadian and non-Canadian material where relevant	K-6	7-10	11-13
5. Select desired materials independently	K-8	9-10	11-13
6. Proceed from general to specific or vice versa when researching a subject	5-8	9-10	11-13
7. Select general reference material	3-8	9-10	11-13
8. Select specialized reference material	3-10	9-12	13
9. Evaluate material for currency	4-8	9-10	11-13
10. Identify stereotyping, bias, and prejudice	K-13	9-13	
11. Select material that presents alternative points of view	5-10	11-12	13
12. Use a bibliography to select additional information	7-10	11-12	13
13. Identify primary, secondary, and tertiary sources	7-11	12-13	
D. Utilization of Resources			
1. Know parts and aspects of a book:			
a. front, back, spine, cover	K	1	2-13
b. name of author, illustrator, and/or editor	K	1-2	3-13
c. table of contents, title page, index	1-2	3-6	7-13
d. name of publisher, copyright date	3-4	5-11	12-13
e. bibliography, glossary, footnotes	5-8	9-12	12-13
2. Use and compare material appropriate to reading level and need:			
a. audio-visual material	K-3	4-10	11-13
b. vertical-file material	3-4	5-10	11-13
c. periodicals	2-8	9-10	11-13
d. general reference material	3-8	9-10	11-13
e. specialized reference material	3-10	9-12	13
f. periodical indexes	7-10	11-12	13
g. different levels of sources: primary, secondary, tertiary	7-11	12-13	

Figure 2.2. Teaching and reviewing library skills. From *Partners in Action: The Library Resource Centre in the School Curriculum* (Toronto: Ontario Ministry of Education, 1982), 30-31.



## Resource-Based Instruction

Resource based instruction developed in response to the inadequacies of early library skills instruction, which included being limited to the physical collection and lack of transference of library and information skills to other situations. Resource based instruction is defined by Hara as “a type of instruction which integrates information skills within classroom subjects for social studies, research-science, environmental studies, creative writing in language arts and in other subjects where information seeking is required. A classroom teacher and a teacher-librarian collaborate in planning as well as in the implementation of the curriculum.”<sup>20</sup> In resource-based learning, information skills are not taught as a separate course but integrated into learning experiences across the curriculum. The library media specialist and the teacher work together as a team to plan and to teach students in all areas across the curriculum that use resources from the school library, external networks and databases, and the community at large. The checklists and continuums of library skills deemed important for information literacy can still be taught, but attempts are made to fit them naturally into the curriculum where students have a need to use them. The aim is to integrate information literacy instruction within a relevant subject context by linking it to classroom objectives and events.

Resource-based teaching was advocated as early as 1958 when Ahlers recommended that principals, teachers and librarians co-ordinate their efforts and incorporate library instruction skills into every subject area.<sup>21</sup> It was not until 1975 that the librarians’ role of instructional design was officially sanctioned in the American Association of School Librarians’ standards, *Media Programs: District and School*.<sup>22</sup> At that time in the UK, the status of librarians was still questionable. Pender states that although the School Library Association published its *Libraries in Secondary Schools* document in 1972, “hardly any mention was made of either curriculum innovations or multimedia items” and that “many educators still remained unconvinced of the value of such a central agency in the school.”<sup>23</sup>

By 1980, however, the concept of resource-based learning was being recommended by the British Library Research and Development Department. Believing that many

schoolchildren were ill equipped to locate and evaluate information, it commissioned a 10-week teaching programme in 1980 entitled *The Need to Know*. After studying how students find and use information, the researchers recommended that traditional library user education is restructured and integrated into the curriculum. In 1982 the Ontario Ministry of Education promoted the concept of collaboration, skill development and resource-based learning in its publication *Partners in Action*.<sup>24</sup> In 1988, the American school library standards, *Information Power*, required the “full integration of the library media program into the curriculum.”<sup>25</sup>

In the early 1980s, partly in response to the publication “A Nation at Risk” in 1983, changes in curriculum design were encouraged and methods to integrate library skills instruction into existing curriculum areas were developed. At this stage of educational reform, however, school librarians were participating more often in curriculum-based library media programmes as opposed to resource-based programmes. The goal of curriculum-based teaching is to integrate varied learning resources into the classroom learning experience of the student, thereby helping teachers accomplish their own instructional objectives, and not particularly the librarian’s.<sup>26</sup> Although resource-based programmes support curricular objectives, the focus of is on teaching information literacy skills through the resources, and not on the specified needs of the curriculum.

Loertscher envisions four levels of resource-based teaching.<sup>27</sup> At the first level, the librarian serves in a support role. S/he follows the teacher’s lead in planning teaching units and projects after discerning the needs of the students. S/he also formulates activities, prepares materials, and produces audio-visual or computer materials to contribute to the success of instruction. At the second level, the teacher and librarian adopt a team approach in instructional design. The school library media specialist participates in every step of the development, execution and evaluation of an instructional unit, but is not necessarily involved in the actual teaching process. The third level involves the librarian more fully in instruction; the entire content of teaching units may depend on the resources and activities of the library programme. At the fourth level, the librarian contributes in curriculum development at the school or district level. S/he serves as a consultant to various



curriculum development committees, making advanced planning for collection development possible.

In a ten-year national research initiative in the United States, the integration of the library media programme was tested for effectiveness. "Library Power," a \$45 million school improvement programme initiated in 1988, operated in 19 communities and affected nearly 700 public elementary and middle schools and more than 400,000 students. The schools that took part in the study received three-year grants with the agreement to provide a full-time library media specialist, keep the library accessible to users throughout the day, increase spending for print and non-print media and provide planning time for teachers and librarians. The initiative has been instrumental in precipitating reform efforts in school libraries by strengthening the role of school library media specialists, integrating information literacy skills throughout the curriculum and involving principals, teachers, students, parents and the community in information literacy programmes.<sup>28</sup>

Hopkins and Zweizig, investigators for the National Library Power Program evaluation, report that library media programmes that receive more acceptance from teachers had seven characteristics:<sup>29</sup>

1. common vision among school library media specialists, principals, teachers, parents and community leaders
2. professional development activities
3. planning opportunities between library media specialists and teachers
4. principal support and leadership
5. support staff availability
6. compatibility between the school library media programme and school initiatives
7. community and district advocacy

Despite the developments in school library media instruction during the 1980s with regard to defining behavioural objectives and integrating library skills instruction into school curricula, library educators continued to express concern over the problem of transference of skills to other information problems beyond the school

setting. Two further developments provided a new philosophy of information skills instruction that would bring it to fuller maturity for the Information Age.

### **Process-Based Instruction for Information Literacy**

Throughout the 1980s, there was a shift from “library skills” to “information literacy.” Since the advent of the information revolution, characterised by the increase in the availability of information and the changes in its storage and dissemination owing to the use of computers, the term “information skills” and “information literacy” have gained popularity over the narrower “library skills” concept. The philosophy statement of the latest American school library standards, *Information Literacy: Standards for Student Learning* (1998), provides a rationale for the new terms:

Today’s student lives and learns in a world that has been radically altered by the ready availability of vast stores of information in a variety of formats. Innovations in traditional printing techniques have joined with advances in electronic technologies to transform the ways we seek and gain information. Students now routinely encounter information in formats as simple as the picture book, as complex as the multimedia package, and as diverse as the literary classic and the personal homepage. The information explosion has provided countless opportunities for students and has dramatically altered the knowledge and abilities they will need to live productively in the twenty-first century. Students must become skillful consumers and producers of information in a range of sources and formats to thrive personally and economically in the communication age.<sup>30</sup>

Kulthau explains the shifting emphasis from library skills to information skills with attention to education for information literacy: “Information skills are much broader than library skills. Where library skills center on location of sources, information skills encompass use of sources and interpretation and application of information within sources. Where library skills center on how to use a library, information skills encompass the underlying concepts and patterns in the organization of information.”<sup>31</sup>

Giving impetus to the development of information skills instruction in the UK was the inclusion of information technology (IT) skills as an essential component of the



English national curriculum. It is considered a foundation subject across all four key stages in England; there are no statutory requirements for IT at Key Stage 4 in Wales. Capability in this subject area is characterised by “an ability to use effectively IT tools and information sources to analyse, process and present information, and to model, measure and control external events. This involves using information sources and IT tools to solve problems; using IT tools and information sources, such as computer systems and software packages, to support learning in a variety of contexts; [and] understanding the implications of IT for working life and society.”<sup>32</sup>

In Australia, the development of information skills is recognised as a critical component of school curricula both at primary and secondary levels. The importance of information skills was recognised by the Australian Education Council in its 1989 Hobart Declaration on Schooling, which included information skills in educational goals. Today, information-based competencies are identified across all key learning areas in national curriculum statements and profiles.<sup>33</sup>

The attempts in the 1980s to define information literacy skills reflects “the impact of information and technology on education; the importance of effective use of information; the need for well-developed skills for seeking, obtaining and using information; and the requirement for technical and cognitive skills to facilitate the process.”<sup>34</sup> Information skills instruction gained international status as it appeared in several countries’ national curricular requirements and UNESCO’s recommendations for schooling.

Currently, information literacy is viewed as an approach to learning that consists of a hierarchy of information problem-solving skills that enable independent and effective learning.<sup>35</sup> Information literacy programmes usually focus on tasks such as the creation and transmission of information, the construction and application of search strategies, access to information, its physical organisation and the evaluation of information. Kapitzke believes that the consensus of the profession today is that “information literacy should not be the domain of the teacher librarian alone and that

training in it should be integrated across all subject areas.”<sup>36</sup> In addition, Lonsdale states that

Internationally, there is a consensus that information skills acquisition requires a developmental programme, following the continuum of education from the kindergarten level through the intermediate school to the secondary level and thereafter into tertiary education. The programme develops commensurate with the conceptual ability of the child, the changing curriculum and assessment procedures employed. Many of the skills are closely linked to the development of language, reading and numeracy development and need to be introduced at an appropriate stage, then practised and reinforced and extended. There is further consensus that skills should pervade the curriculum and be a compulsory element of individual subject fields rather than comprise an ad hoc course conducted in isolation by the library.<sup>37</sup>

The first significant development in information skills instruction was the shift from “library skills” to “information literacy;” the second was the conceptualisation of the process approach of information problem solving. In 1981, the British Library and Schools Council “laid the foundation for a new view of information skills when they attempted to operationally define the elements of an information seeking process. Nine information use questions were formulated and identified as suitable guidelines for curriculum development in the area of information use education.”<sup>38</sup> These nine questions<sup>39</sup> served as a basis for the evolving school library instructional models that developed in the 1980s:

1. What do I need to do?  
(formulation and analysis of need; selection of topic)
2. Where could I go?  
(identification and appraisal of likely sources)
3. How do I get the information?  
(tracing and locating individual resources)
4. Which resources shall I use?  
(examining, selecting and rejecting individual resources)
5. How shall I use the resources?  
(interrogating resources)
6. What should I make a record of?  
(recording and storing information)

7. Have I got the information I need?  
(interpretation, analysis, synthesis, evaluation)
8. How should I present it?  
(presentation, communication, shaping a topic)
9. What have I learned?<sup>40</sup>

Ann Irving, who pioneered research in school library instruction in the UK, elaborated considerably on these nine questions in her renowned book, *Study and Information Skills across the Curriculum* (1985).

In 1983, Marland proposed a whole-school information skills curriculum which emphasised the selection, rejection and evaluation of sources, the organisation of information, and topic and question development.<sup>41</sup> This method, known as the process approach, is derived from research in a variety of fields: cognitive psychology, developmental psychology, learning theory, and research in information seeking behaviour. As Clary states, "these combined elements have been used to develop a theoretical base that links information skills and critical thinking skills."<sup>42</sup> In 1986, Mancall, Aaron and Walker, using the new terminology for library skills instruction, stated that "information management skills instruction...must be broader and more process-oriented. Focus must go beyond location skills and 'correct answers' toward strategies that will help students develop insight and faculty in structuring successful approaches to solving information needs."<sup>43</sup>

The process approach to library and information skills instruction is not dependent on any particular source or library; the emphasis is on developing transferable cognitive skills that increase the effective use of libraries and resources, and especially of information in general. In 1975, Kirk drew attention to the three parts of a complete information skills programme: content, product and process.<sup>44</sup> The student's knowledge of the library and its materials (content) is shown by the results the students achieve when they use the library (product). The procedure the students use in locating and using information (the process) is an equally important component of an information skills programme. Oberman and Linton believe that it



is “the intellectual process underlying successful research that should be stressed.”<sup>45</sup>

The process approach emphasises the need to investigate and shape a topic rather than simply finding the correct answer to a question.

A major concern in school library programmes is the transference of knowledge to solve other information problems, especially to the college level. In 1981, Dickinson stated that almost all students are “totally innocent of how a library works and do not have even a vague idea how to set about finding information they need or want when they arrive at a college or university.”<sup>46</sup> Kuhlthau believes that “exclusive source orientation and excessive concern for the product of library research without any consideration for the process of learning from information seem to be at the very heart of the problem of transference.”<sup>47</sup> The process-based approach to teaching information skills addresses this concern because the problem-solving process is taught as a systematic process that is not limited to certain library assignments, research papers or reports, but one that can be applied in any situation that involves information problem solving. Students are taught a process that is both generalisable and transferable, making it applicable on future occasions and in different situations.

During the 1980s, several process-based information skills models developed. They all propose that information seeking is a problem-solving process and that the library media programme is an appropriate vehicle by which to teach students how to think and solve problems in a systematic manner. The differences in the models are primarily in terminology and the breakdown of broad skills into components. Following is a review of four of the most often-cited approaches to process-based instruction, presented in chronological order by author.

Kuhlthau, 1985 and 1987. Through case studies, interviews, observations and content analysis, Kuhlthau developed a six-stage model of the research process and later identified the thoughts and feelings that coincide with each stage. Her findings are presented in Figure 2.3 on the following page.

**Figure 2.3**  
**Kuhlthau's Six-Stage Model of the Research Process**

<u>Stage</u>	<u>Task</u>	<u>Typical Thoughts and Feelings</u>
1	Initiating a Topic	uncertainty and apprehension
2	Selecting a Topic	optimism
3	Exploring Information	confusion, frustration and doubt
4	Forming a Focus	clarity
5	Collecting Information	sense of direction and confidence
6	Preparing to Present	relief, satisfaction, accomplishment
7	Assessing the Process	

Kuhlthau's model offers some interesting insights into students' emotional behaviour during the research process. Oberman succinctly assesses the worth of Kuhlthau's study: "The significance of Kuhlthau's work is that it provides a road map of student thinking at each stage of the research process. Additionally, it provides a potential yardstick by which students can gauge their state of mind and recognise that as each stage is completed a growing sense of confidence and accomplishment will emerge. Among other things, Kuhlthau's study suggests that the process of research is often filled with ambiguities and uncertainties. Finally, she proposes that once students understand that research is not a linear process, they can proceed with reassurance and security. By understanding the process, students will be better prepared to be successful."<sup>48</sup>

Stripling and Pitts, 1988. The research process is delineated in ten steps by Stripling and Pitts and it emphasises a thinking process throughout the students' work. Reflection points direct students to evaluate their work, and to revise and repeat a previous research process step until the reflection point question is answered satisfactorily. The ten steps are presented in Figure 2.4 on the following page.

**Figure 2.4**  
**Stripling and Pitts' Ten-Step Research Process Model**

Step	Task	Reflection point
1	Choose a broad topic.	
2	Get an overview of the topic.	
3	Narrow the topic.	Is my topic a good one?
4	Develop a thesis statement of purpose.	Does my thesis or statement of purpose represent an effective, overall concept for my research?
5	Formulate questions to guide research.	Do the questions provide a foundation for my research?
6	Plan for research and production.	Is the research/production plan workable?
7	Find/analyze/evaluate sources.	Are my sources usable and adequate?
8	Evaluate evidence/take notes/compile bibliography.	Is my research complete?
9	Establish conclusions/organize information into an outline.	Are my conclusions based on research evidence? Does my outline logically organize conclusions and evidence?
10	Create and present final product.	Is my paper/project satisfactory?

Stripling and Pitts have also offered a research taxonomy that delineates six levels of thought for research assignments, which vary from simply finding facts to generating new concepts about complex issues; this is coupled with a taxonomy of reactions to research, thereby linking the research and thinking processes together to create opportunities for developing critical thinking skills. They emphasise that not only must the thought level of the research be considered, but also the type and level of the product the student must create as a reaction to research. As Stripling and Pitts explain, teachers who design research assignments must just as carefully plan the second phase of the assignment – the student's product. "For every research assignment, students must create a product. Unless they use the knowledge gained from their research, that knowledge becomes inert, dead. [Teachers should encourage] them to produce a product in which they thought about their research material and reacted to it rather than merely copied or paraphrased it."<sup>49</sup> Therefore,



their research taxonomy is coupled with a taxonomy of thoughtful reactions to research, presented in Figure 2.5 below.

**Figure 2.5**  
**Stripling and Pitts' Research and REACTS Taxonomies**

<u>Research taxonomy</u>	<u>Characteristics</u>	<u>REACTS taxonomy</u>
1. Fact-finding	Finding simple facts	Recalling
2. Asking/searching	Finding answers to questions	Explaining
3. Examining / organizing	Reorganizing information	Analyzing
4. Evaluating / deliberating	Evaluating information and conclusions	Challenging
5. Integrating / concluding	Drawing conclusions	Transforming
6. Conceptualizing	Creating original solutions	Synthesizing

To give an example, research on ancient Greece could be followed with a simple recall assignment (level 1) such as “Write a letter to a friend describing the information you discovered” to a synthesis of information (level 6) such as “develop a model for the decline of any civilization and suggestions for civilizations wishing to prevent decline.”<sup>50</sup> When research is combined with a REACTS assignment, it becomes more meaningful and enjoyable, and flexibility and creativity can be incorporated into the research process.

Stripling and Pitts' research process is not a generic information –problem solving model but relates more specifically to research papers or projects. Winn believes, however, that it provides a “thinking frame” that can become automatic with practice and is transferable to other situations.<sup>51</sup>

Eisenberg and Berkowitz, 1990. Eisenberg and Berkowitz developed the *Big Six Skills*, which represent a systematic approach to solve any information-oriented problem. The “big six” refer to six broad skill areas necessary for information

problem solving, each necessary for the successful resolution of an information problem. The Big Six Skills approach has received a very positive response since its introduction in 1988. “Library media specialists, teachers, and administrators quickly grasp the power and simplicity of teaching information problem-solving as a generalizable process.”<sup>52</sup> The Big Six skills are represented in Figure 2.6.

**Figure 2.6**  
**Eisenberg and Berkowitz’s Big Six Skills and Components**

1. Task definition
  - 1.1. Define the problem.
  - 1.2. Identify the information requirements of the problem.
2. Information Seeking Strategies
  - 2.1. Determine the range of possible sources.
  - 2.2. Evaluate the different possible sources to determine priorities.
3. Location and Access
  - 3.1. Locate sources (intellectually and physically).
  - 3.2. Find information within sources.
4. Use of Information
  - 4.1. Engage (e.g. read, hear, view) the information in a source.
  - 4.2. Extract information from a source.
5. Synthesis
  - 5.1. Organize information from multiple sources.
  - 5.2. Present information.
6. Evaluation.
  - 6.1. Judge the product (effectiveness).
  - 6.2. Judge the information problem-solving process (efficiency).

The Big Six Skills approach has nine main themes<sup>53</sup> as envisioned by its authors:

1. It is a general approach to information problem-solving that can be applied to any information problem situation.
2. It is a critical thinking hierarchy that includes higher cognitive levels.

3. It is basic and transferable, making a connection between school and real life rather than centering on research.
4. Information problem solving is not always a linear step-by-step process. "Looping back" is encouraged.
5. It does not require all students to do things in exactly the same way. The Big Six Skills encourages recognition of differences in personal style and offers alternative paths to the same end. It also accommodates the affective or emotional aspect of information seeking, as well as personal styles in information seeking and use.
6. It provides a broad structure for library and information skills curricula. A school's existing scope and sequence approaches are easily adapted to the Big Six Skills structure.
7. It is ideal for integrating skills instruction with subject area curriculum.
8. It is an information problem-solving process that can be introduced, reviewed, remediated or practised as individual skills, in a variety of combinations, or as a total problem-solving methodology.
9. It is a top-down approach. Focus should be on the "big picture" before concentrating on details. However, students must always be reminded how the particular skills being used fit into the overall process.

The Big Six Skills can be integrated into the school classroom curricula if existing curriculum activities are matched with related Big Six Skills. Many curriculum activities lend themselves to Big Six instruction, so the challenge becomes selecting from among the many opportunities to determine which activities will be most effective for developing information literacy skills. Eisenberg and Berkowitz offer a complete scope and sequence of a library and information skills curriculum based on the Big Six skills approach, reproduced in Appendix 1.

Pappas and Tepe, 1997. The Pathways to Knowledge Model developed by Pappas and Tepe presents six stages in the information gathering process and reinforces the notion that it is non-linear. The six stages with their search strategies and functions are presented in Figure 2.7 on the following page.



**Figure 2.7**  
**Pappas and Tepe's Pathways to Knowledge Model**

Stage	Strategies	Function
Appreciation	Prompt for research	
Presearch	Develop an overview Explore relationships	Establish a focus
Search	Identify information providers Select information resources and tools Seek relevant information	Plan and implement search strategy
Interpretation	Interpret information	Assess usefulness of information
Communication	Apply information Share new knowledge	Constructing and presenting new knowledge
Evaluation	Evaluate the process and product	Thinking about the process and product

Each of the six stages in the Pathways Model includes a variety of strategies that enable searchers to carry out the function of that stage. It is a holistic information process model having the following characteristics:<sup>54</sup>

- Presearch strategies that develop an overview and explore relationships;
- A range of strategies for searching, interpreting, communicating and evaluating information use;
- Specific searching strategies that are critical with emerging electronic information tools and resources;
- A focus on reading, viewing and listening to various forms of information to nurture an appreciation of literature and motivate a sense of inquiry among learners;
- Multiple modes of assessment and evaluation for both process and product;
- Continual updates that reflect current research and changing technology.

Pappas and Tepe have also provided a graphical presentation that can be used by students and instructors as a visual map of possible information-gathering

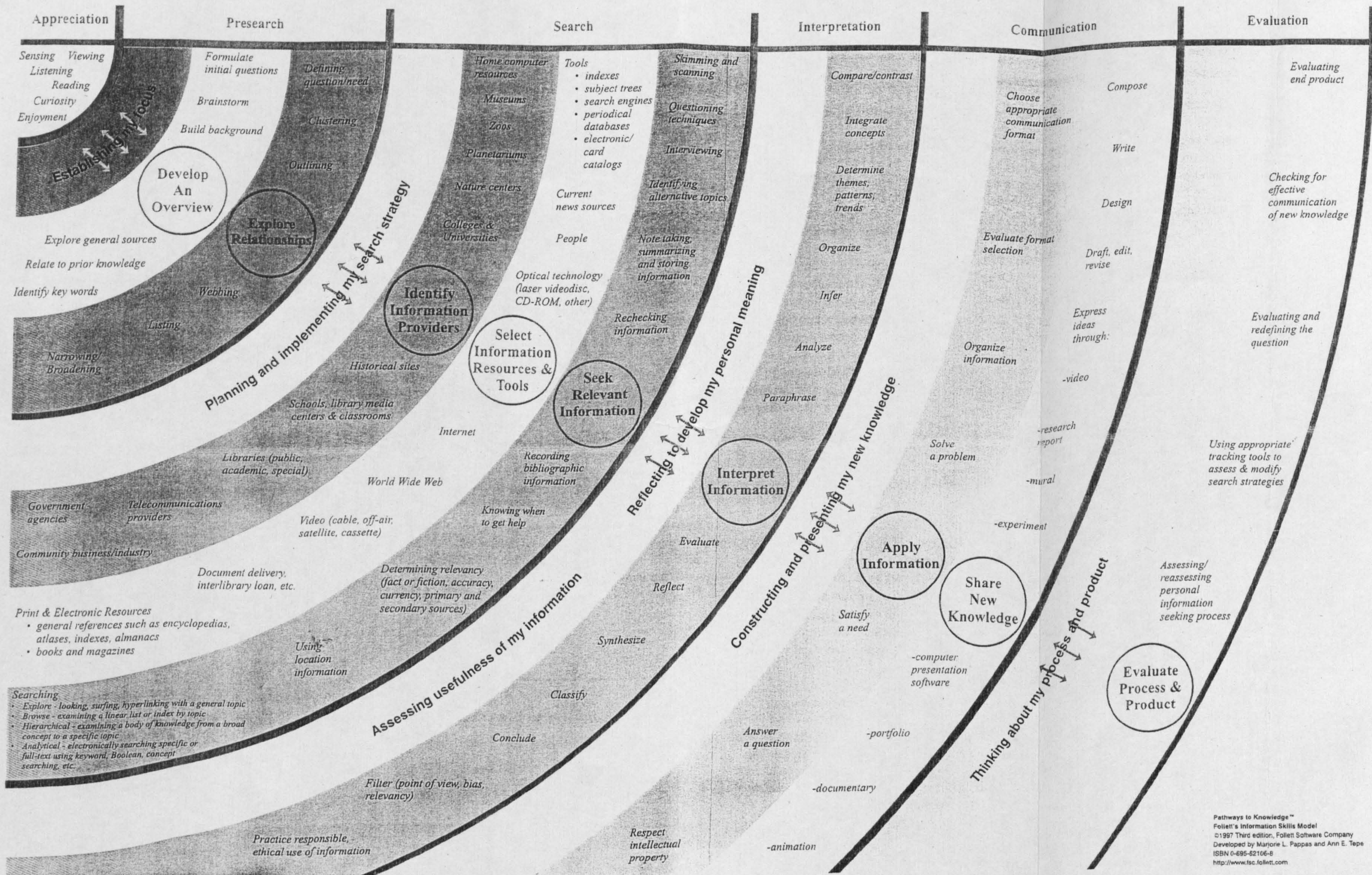
processes.<sup>55</sup> The model can be used as an instructional tool that can be used directly with students to encourage them to gather, analyse and apply information using various strategies to meet individual needs, and a conceptual map to design integrated curriculum units and lessons with faculty.<sup>56</sup> The graphical representation of the model, which is reproduced in Figure 2.8 on the following page,<sup>57</sup> gives the student a range of possible sources or courses of action throughout the research process.

Several other researchers and teacher-librarians have offered models for the research process. Oberman and Linton adopted Wales's decision making steps<sup>58</sup> to library instruction, resulting in a ten part model in 1982 called "Guided Design."<sup>59</sup> The ten-part model consists of these stages: 1) identify the scope of the problem; 2) analyse the scope of the problem; 3) state the constraints of the scope; 4) generate solutions; 5) refine solutions; 6) analyse; 7) synthesise; 8) formulate the search; 9) search; and 10) complete the research process. It provides for the teaching of the three basic elements of library research – needs analysis, linkage between knowledge and bibliographic structure, and evaluation, as well as for the teaching of information sources. Irving's nine-step model (1985) to use in completing school assignments represents a systematic approach to handling information. The steps include: 1) identify the information need; 2) locate resources; 3) select resources; 4) store information; 5) analyse information; 6) synthesise information; 7) evaluate information; 8) present information; and 9) evaluate the assignment. The Australian School Library Association (ASLA) and the Australian Library and Information Association (ALIA) developed a model of information literacy which differentiates between the information process, literacy, and critical thinking and problem-solving skills.<sup>60</sup> Their model, presented in Figure 2.9, represents the multiple aspects of information literacy.

O'Connell and Henri describe the Information Process model:

an information process as a core activity, with the interactive skills of literacy and critical thinking as integral to the process of collecting, analyzing and organizing information across all learning areas. The model demonstrates that information literacy, and the information process, can provide the conceptual





Pathways to Knowledge™  
 Follett's Information Skills Model  
 ©1997 Third edition, Follett Software Company  
 Developed by Marjorie L. Pappas and Ann E. Tepe  
 ISBN 0-695-62106-8  
<http://www.fsc.follett.com>

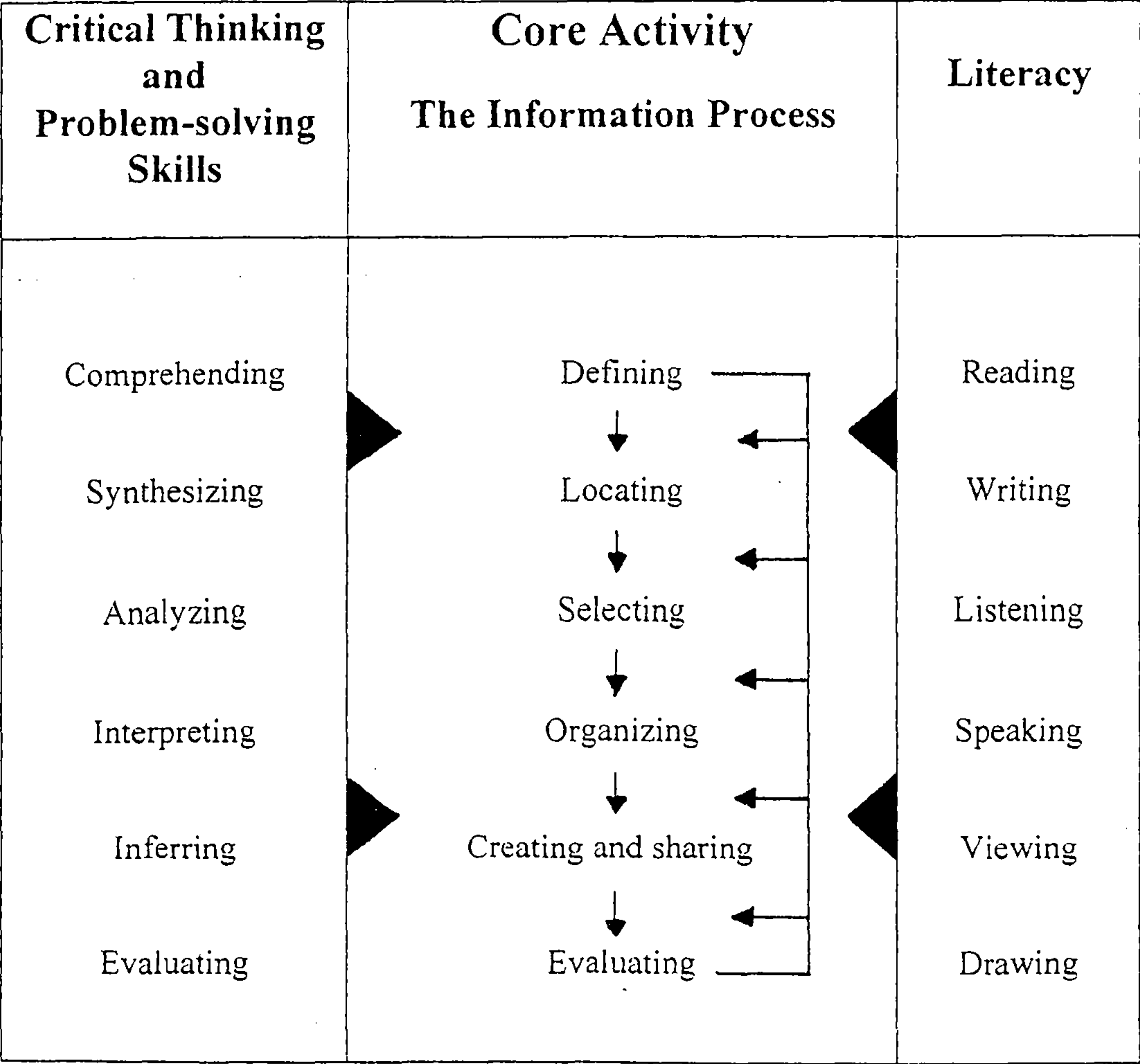
**Figure 2.8**  
**Pathways to Knowledge: Follett's Information Skills Model**



framework for the development of educational models and new curricular concepts for systematically addressing learning in an information-rich society.<sup>61</sup>

They note that the articulation of the information skills and the development of process models to teach information literacy “match the emergence of the technological era and the phenomenal growth in knowledge and resultant information available in the world today.”<sup>62</sup>

**Figure 2.9**  
**The Information Process**



## Comparative Research

With the exception of Kuhlthau's model, which was formulated using a number of methodologies such as content-analysis, case studies, interviews and observations, the library and information skills models discussed above were developed based on their authors' years of practical experience working with students and meeting their library and information needs. However, as Eisenberg states, "research investigations must confirm or refute conventional understandings. It is also important to be able to generalise beyond the setting of specific studies to the full range of library media instructional settings. This is accomplished through research design and replications of studies."<sup>63</sup> Several studies, described below, have investigated the effectiveness of different approaches to information skills instruction.

Research indicates that resource-based information skills instruction is more successful than the traditional library skills approach. In her doctoral thesis, Nolan<sup>64</sup> compared these two methods of instruction in library research skills for elementary school students. She concluded that students learned information search skills that were integrated into the classroom curriculum better than when they were taught in isolation. She also reported an affective result in that when the skills were integrated, "students used the library more often, expressed greater self-confidence, and used library resources more for completing class assignments."<sup>65</sup> Oliver and Oliver, in a similar study, showed that "information seeking that was driven by a contextual and practical need resulted in higher levels of retention and learning."<sup>66</sup>

Deweese investigated a process-oriented approach versus a traditional source-based approach.<sup>67</sup> Two fourth grade classes were tested on seven reference skill areas (table of contents, encyclopaedia, card catalogue, dictionary, table interpretation, index use and map reading) after receiving either process-based or source-based instruction to teach those skills. The class that used a process approach performed better both overall and on each skill area than the class taught research skills as separate entities, suggesting that a process-based approach can be more effective than the source-based approach.



Clary undertook a comparative study to investigate the information location and interpretation behaviour of 50 seventh grade students.<sup>68</sup> The control group received source-based instruction. The experimental group received instruction in a process approach. Analysis of statistical procedures and descriptive data lead to the conclusions that the method of instruction has no significant effect on the information location skills or level of confidence with library and information skills. The process approach did not increase the ability to synthesise written information or to evaluate information use processes. However, the students who were instructed with the process approach exhibited better task definition skills, information seeking strategies and information use skills. She also noted that the students taught using the process approach had a better attitude toward information skills and work in the library.

### **Implementing Instruction for Information Literacy**

Despite the general acceptance that information literacy instruction is important for school children, there is often a lack of success in teaching it. In the UK, the problems and difficulties faced by those who run school libraries at the present time “abound,” according to Conway.<sup>69</sup> The most serious obstacle to school library programme development seems to be the fact that, to this date, there is no statutory provision for libraries in all schools in England and Wales, unlike Scotland and Northern Ireland. Nevertheless, 75% of England’s secondary schools had central libraries by 1979<sup>70</sup> and almost all schools currently have a library of some sort.<sup>71</sup> A second obstacle is the fact that there is no standard qualification or initial training for a teacher-librarian in the UK. The vast majority of school libraries are managed by teachers, “many of whom have no knowledge of library organization when they take on the job... and most of whom are expected to run the library in addition to having a full, or almost full, teaching timetable.”<sup>72</sup> Although professional librarians who have library skills manage some libraries, they are rarely equipped with a teaching qualification as well. Furthermore, the use of the library does not feature much, if at all, in the training programmes for teachers in the UK.<sup>73</sup>



Conway sums up the problems and difficulties faced by school libraries in the UK as “lack of funding, lack of central role in the curriculum, lack of central role in management structure and inadequate staffing.”<sup>74</sup> There are some recent developments, however, that encourage the development of well stocked and staffed school libraries. The first is the introduction of the National Curriculum in 1988, which stipulates that students need to acquire specified information skills throughout key stages of learning. Testing of these skills is required at ages 7, 11 and 14 years, and the results are published for public scrutiny, as are the reports of OFSTED (Office for Standards in Education), which inspects schools every four years regarding the quality of teaching and learning, management, accommodation and resources.

Secondly, government policy throughout the 1990s to extend the market economy into the public sector is resulting in competition between schools for pupils and a ‘customer orientation.’ Libraries have benefited since they can be something of a ‘showplace’ in the schools, thereby demonstrating to parents the value they might expect to get for their enrolment fees.

The third development to encourage school library development is the government strategy to connect all schools to the National Grid for Learning (NGfL), which is a mosaic of networks and content providers linked together to create a nation-wide learning network for schools, colleges, libraries and, eventually, homes.<sup>75</sup> By 2002 all schools should be connected to the NGfL and all teachers should be competent and confident to teach with information and communications technologies. To support the strategy, plans are being made for substantial teacher-training programmes across the UK.

In the USA, standards have played an important role in the development of school libraries, services and programmes. As early as 1918, library instruction was included in school library standards, emphasising the use of standard library tools. All standards published after that date describe the library as an integral part of the educational program, with the 1945 standards being significant for many reasons.

First, they place responsibility for providing school library service upon local boards of education. Second, the term 'school library program' was used for the first time in standards, establishing the concept that the school library is more than just a facility and collection. Finally, there was reference to the cooperative participation of the superintendent, principals and teachers that reflects modern standards that encourage such collaboration.<sup>76</sup> The 1988 standards are called 'guidelines' rather than 'standards' due to their qualitative nature, providing a sound philosophical basis for school library media programmes that meet student needs in the 21<sup>st</sup> century. The most recent standards, *Information Literacy Standards for Student Learning*<sup>77</sup> provide a conceptual framework and broad guidelines for describing the information-literate student. The standards are based on the recognition that "students must become skillful consumers and producers of information in a range of sources and formats to thrive personally and economically in the communication age."<sup>78</sup> There are nine standards in three categories, further elaborated with 29 indicators. Each indicator is described with three levels of proficiency: basic, proficient and exemplary. Taken together, they describe the content and processes that students must master to be considered information literate. The nine 1998 *Standards* are presented on the following page in Figure 2.10.



**Figure 2.10**

**The Nine Information Literacy Standards for Student Learning**

Information Literacy	
1	The student who is information literate accesses information efficiently and effectively.
2	The student who is information literate evaluates information critically and competently.
3	The student who is information literate uses information accurately and creatively.
Independent Learning	
4	The student who is an independent learner is information literate and pursues information related to personal interests.
5	The student who is an independent learner is information literate and appreciates literature and other creative expressions of information.
6	The student who is an independent learner is information literate and strives for excellence in information seeking and knowledge generation.
Social Responsibility	
7	The student who contributes positively to the learning community and to society is information literate and recognizes the importance of information to a democratic society.
8	The student who contributes positively to the learning community and to society is information literate and practices ethical behavior in regard to information and information technology.
9	The student who contributes positively to the learning community and to society is information literate and participates effectively in groups to pursue and generate information.

Throughout the century, US standards have become broader in scope: from providing access and educational support, to ensuring that students are not only information literate, but also independent and socially responsible learners.

However, McCarthy notes that although educational bodies create standards or learning goals for school library media programmes, efforts are usually not translated into meaningful state standards. “Without states requiring implementation of standards including full-time library media specialists and flexible schedules, library media specialists are left to negotiate change in their own schools.”<sup>79</sup> Winn cites some reasons why teaching library literacy is not always successful:<sup>80</sup>

1. Universal agreement on the overall goals does not exist. Some wish to teach only the tools needed to complete a course assignment; others feel that teaching search strategy is more important.
2. Coherence between levels is lacking. Because time must be devoted to repeating the basics, the more sophisticated concepts are seldom given enough attention.
3. Few librarians receive educational preparation for conducting library-use instruction; they are rarely provided with standardised curricular materials by their school district, college or university and so must prepare themselves, providing their own curricula as best they can.
4. Finally, few states promulgate and enforce standards for library-use competencies a student should possess to advance or graduate at any given level. Coordination of course content between different levels in the educational system is needed to promote continuing progress of students from kindergarten through higher education.

In 1997 McCarthy studied 48 library media programmes in the United States to determine the effectiveness of translating the 1988 school library standards into realisable programmes. According to the standards, library media specialists are called to perform three roles: teacher, information specialist and instructional consultant. She reports that “success varies widely depending on the culture of reform in the school and whether a full-time library media specialist exists, has an adequate budget, a variety of resources and technology, and an integrated program of services.”<sup>81</sup>

Standards for preparation of school library media specialists in the USA vary from state to state and also within states. There have been a variety of configurations for the education of school librarians, including one-year graduate level programmes, four-year undergraduate library education programmes and four-year teacher training



with school librarianship as a speciality.<sup>82</sup> The ALA, which joined the National Council for the Accreditation of Teacher Education (NCATE) in 1985, started reviewing in 1992 preparatory programmes for compliance to certification requirements. Testing in 56 competencies, organised around professionalism, management, communication and group dynamics, collection management, organisation, administration, instructional leadership and access, is used as the basis for entry into the profession.<sup>83</sup> In 1996, 15 states were using competency-based measures for school library media specialist certification.<sup>84</sup>

On the international level, progress is being made in many ways. The School Library Manifesto issued by UNESCO has undergone four revisions, the latest being ratified at the 30<sup>th</sup> UNESCO General Conference in November 1999. With the mission of the school library being “to nurture the educational process,” the core school library services as outlined in the manifesto are specified as:

- Supporting and enhancing educational goals as outlined in the school’s mission and curriculum;
- Developing and sustaining in children the lifelong habit and enjoyment of reading and learning, and the use of libraries throughout their lives;
- Offering opportunities for experiences in creating and using information for knowledge, understanding, imagination and enjoyment;
- Supporting all students in learning and practising skills for evaluating and using information, regardless of form, format or medium, and including sensitivity to the modes of communication within the community;
- Providing access to local, regional, national and global resources and opportunities that expose learners to diverse ideas, experiences and opinions;
- Organising activities that encourage cultural and social awareness and sensitivity;
- Working with students, teachers, administrators and parents to achieve the mission of the school;
- Proclaiming the concept that intellectual freedom and access to information are essential to effective and responsible citizenship and participation in a democracy;

- Promoting reading and the resources and services of the school library to the whole school community and beyond.<sup>85</sup>

UNESCO urges governments, through their ministries responsible for education, to develop strategies, policies and plans that implement the principles of the manifesto.

Also encouraging is the attendance of 732 participants representing 23 countries in the first International Seminar of School Librarians held in October 1999 in Chile. Mekis, representing the sponsoring organisation, the International Association of School Librarianship, summarised the challenges that school librarians around the world must meet in the coming years. They include the creation of more learning resource centres, especially at the primary level where only classroom collections may exist; co-operative work between librarians and teachers at schools; better education and training for librarians and teachers librarians; more working hours for librarians and teacher librarians; the automation of school libraries; and co-operation between school and public libraries to share facilities and collections.<sup>86</sup>

## **Conclusion**

During the past century, library skills instruction has evolved with respect to both content and method. The content of early library skills instruction focused on the location and use of specific sources; this later evolved into the pathfinder approach, which outlined each step in finding and using information. Most recently the content of instruction is changing to encompass the concept of information literacy, focusing on the processes involved in solving information-related problems of any type. As the content of instruction for information literacy has changed, so did the methods. Early instruction was usually taught in isolation by the librarian, and is still the case in some schools. However, resource-based education has been accepted as a more effective way to teach information skills, and is used when teachers and principals collaborate with librarians to integrate instruction for information literacy into the



whole school curriculum. Thus, a variety of combinations is possible when teaching information literacy skills:

- Source approach taught in isolation
- Source approach integrated in the curriculum
- Process approach taught in isolation
- Process approach integrated in the curriculum

The latter is generally accepted as the most effective approach to teach information literacy to schoolchildren.

Many factors affect the provision of instruction for information literacy in schools, such as funding, the availability of and adequate number of trained staff, and a central role for the librarian in curriculum planning. Although some of these components may be lacking in individual school libraries, a successful programme for information literacy is possible if the school librarian has strong leadership skills and the opportunity to plan with teachers. The support of principals and the provision of support staff are also important factors in the success of library instructional programmes.

The school library media centre has witnessed, during the past century, fundamental changes in education, communications and information that have affected the way that information is created, stored, processed and presented. These changes have shaped the school library into a potentially central organ within the school, responsible for providing students with access to information in the broadest sense of the word. Today's librarians are called to provide not only facilities and resources, but also instruction in the intellectual processes necessary for information literacy in a rapidly changing world. Library instructional programmes, therefore, must focus on both content and process, and help students develop the skills and understandings they need to become truly information literate.

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## Chapter Three

### Culturally Relevant Education

#### Introduction

Culture may be defined as “the ways in which a group of people make meaning of their experiences through language, beliefs, social practices, and the use and creation of material objects.”<sup>1</sup> It refers to the cumulative deposit of knowledge, values, beliefs, skills, tools, aesthetic objects, ways of thinking, customs and institutions into which members of society are born. A product of culture is shared identity among citizens.

A part of cultural identity is what Bellah calls “cultural vision.”<sup>2</sup> He describes four models of cultural vision, the most pervasive being Western ethnocentrism. In this view, the modern west is considered the most advanced and the task of other cultures is to ‘catch up’ with theirs. As he explains,

Not long ago it was common to rank the cultures of the world in terms of how closely they resembled our own. Modern Western culture was seen as the standard of rationality and progress toward which all other cultures are or ought to be approaching.<sup>3</sup>

Although closely allied with colonialism and imperialism, this view is reinforced by many other cultures that readily adopt features of modern western culture, which Bellah defines as “radical secular individualism and its accompanying egalitarianism.”<sup>4</sup>

While this is the most pervasive cultural view according to Bellah, other views include cultural relativism, where each culture is considered unique and respectable, and, therefore, equal. Bellah refers to this view as “standardless egalitarianism.”<sup>5</sup>

The third view is romanticism of oriental cultures, which often is incomplete in that the total meaning and way of life they represent may be overlooked or misunderstood. Finally, Bellah offers the “comparative perspective,”<sup>6</sup> whereby the study of other cultures leads to deepened self-knowledge and a reconsideration of



values. Those who adopt the comparative perspective neither cling to traditional ways nor replace them completely with a great loss of identity.

Cultural vision, as a component of cultural identity, is evident in a country's political system, economy, educational system and patterns of private lives.

### **Culture in Education**

Organised education is a component of culture: it reflects the knowledge, beliefs, skills, customs and ways of thinking of those in society. Schools are agents of cultural transmission and their curricula serve a specific purpose, which is to prepare members of society for basic conceptions and expectations of the society that sponsors it. The curriculum develops cultural unity and stability and responds to inevitable social change. As Hirsch explains,

School is the traditional place for acculturating children into our national life. Family, church, and other institutions play an important role, but school is the only institution that is susceptible to public policy control. In the modern age, the role assigned to our schools is to prepare our children for the broader activities of society and to train them in the literate public culture.<sup>7</sup>

A basic assumption of education in a given society is that it is relevant to the culture of the people to whom it is offered. Culturally relevant education is not a new concept -- it is as old as education itself. Traditionally, those entrusted with the education of youngsters were usually of the same community and, thus, the same culture. Their curricula addressed the needs of the society in which they lived, their methods were appropriate to the children they taught, their material was relevant to the needs of the individual student for personal growth and to the needs and expectations of the community. There is no reason to believe that education historically was not culturally relevant.

When education was institutionalised and curricula, methods and materials began to be shared across larger geographic areas, education lost some of its cultural relevance for many children. Since World War II, in particular, there has been immense social change, including decolonisation and extensive labour migration as people from

Europe sought new lives in other parts of the world.<sup>8</sup> Millions of refugees, displaced persons and prisoners of war went to their homelands or sought new lives elsewhere. More than 450,000 European refugees settled in Britain alone between 1945 and 1950.<sup>9</sup> In the United States, desegregation resulting from various civil rights movements led to populations of students with mixed racial and ethnic characteristics.

With the growing diversity in school populations came the “task of incorporating ethnic minority children into educational systems designed for the majority society.”<sup>10</sup> The traditional materials of English or American (majority) society are described as “class-bound, white Anglo-Saxon, Protestant, racist, sexist, [and] excessively Western.”<sup>11</sup>

Since many Western curricula were constructed to serve particular interests that promoted white, male capitalist culture, they often ignored or denigrated cultures unlike their own. People of colour and lower class children, often one and the same, were often underserved in the educational system. While the content of the curricula may not have blatantly or intentionally promoted the white culture, oftentimes the performance standards and evaluation criteria for success enforced the culture; the students’ knowledge, skills and attitudes, in comparison to the idealised culture, determined his success in school.

Reflecting an effort to make education more equitable for various groups, multiculturalism in schools has been the topic of much research and discussion in the educational literature in the past twenty years. By 1980 multicultural education became an issue and a reform movement aimed at changing the content and process in schools that promoted monoculturalism. By 1987 Sleeter and Grant<sup>12</sup> identified 89 articles and 38 books which discussed multicultural education. However, Manning and Baruth<sup>13</sup> note that before 1978 the Educational Index did not include multicultural education in its listing,<sup>14</sup> indicating that until that time it was not a major issue in the educational literature.



In England, multicultural education gained prominence in the 1970s after an international conference, Education for Cultural Pluralism, was held in London in 1970.<sup>15</sup> In 1988 the British government took direct responsibility for the school curriculum and its assessment with the Education Reform Act, which called for a balanced and broadly based curriculum. “The general advice on the whole curriculum,” states King,<sup>16</sup> “requires the specific needs of ethnic minority pupils to be met. Their cultures, languages and religions are to be treated with dignity and respect and are regarded as an educational enrichment for all pupils.” Like Britain, many countries’ educational systems are coming to terms with the changes necessary to successfully incorporate minority children into schools.

The current trend in education is toward culturally responsive curricula, and away from ethnocentrism or monoculturalism. Several terms are used in the literature to describe the inclusion of different cultural perspectives in the curriculum, including multicultural education, cross-cultural education, intercultural education, culturally congruent education, culturally appropriate education, culturally responsive education and culturally relevant education. While the terms differ in their approaches to integrating culture in the curriculum, Sleeter and Grant discovered five prevailing approaches to multicultural education: teaching the culturally different, human relations, single group studies, multicultural education and education that is both multicultural and social reconstructionist. These five approaches are described below.

*Teaching the culturally different.* The goal of teaching the culturally different is to help minority students develop competence in the public culture of the dominant group while developing a positive group identity. Educational opportunities are improved for minority children in ways that build on, rather than replace, the language, values and experiences of the children being taught.

*Human relations.* The human relations approach to multicultural education identified by Sleeter and Grant aims “to help students of different background communicate, get along better with each other and feel good about themselves.”<sup>17</sup> It promotes good human relations among students of different races.

*Single group studies.* Single group studies focus on the experiences and cultures of a specific group, such as an ethnic group. Such a group is studied to sensitise students to its victimisation as well as to its accomplishments, and may attempt to mobilise students to improve social conditions for that group. However, Sleeter and Grant note that this type of “multicultural” education tends to ignore multiple forms of human diversity and cannot be called truly multicultural.

*Multicultural education.* The most common approach to multicultural education is described by Sleeter and Grant as just that: multicultural. They examined 47 articles and 19 books that generally agree on five goals of multicultural education:<sup>18</sup>

Strength and value of cultural diversity

Human rights and respect for cultural diversity

Alternative life choices for people

Social justice and equal opportunity for all people

Equity distribution of power among members of all ethnic groups.

In general, multicultural education explores various cultures in the curriculum, with their components of beliefs, customs, and contributions to the global society. According to Taxel, it is “education that addresses the interests, concerns and experiences of individuals and groups considered outside of the socio-political and cultural mainstream of American society.”<sup>19</sup> It may also be inclusive of persons whose lifestyle distinguishes them from the mainstream group, such as handicapped or homosexual persons. The goal of multicultural education, according to Manning and Baruth, is to “teach learners to recognize, accept and appreciate cultural, ethnic, social class, religious, and gender differences [and to] instill in learners during these crucial developmental years a sense of responsibility and a commitment to work toward the democratic ideals of justice, equality and democracy.”<sup>20</sup> In short, the goal of multicultural education is to promote understanding, acceptance, respect and social justice among members of a pluralistic society.

In general, there are different perceptions of what multicultural education is. At its simplest level, it is a study of ethnicity and includes the characteristics and



contributions of an ethnic group. It could also involve the study of the historic oppression of certain groups and the atonement or compensation for past injuries; this is a concern primarily of minority groups. A more thorough approach addresses the historical facts and events that led to the present condition of ethnic groups.

*Multicultural and social reconstructionist.* Sleeter and Grant's fifth category of multicultural education is that which is both multicultural and social reconstructionist. It prepares students to take social action against inequalities, emphasising the use of power for collective betterment. Suzuki<sup>21</sup> calls this emancipatory education and Gordon<sup>22</sup> calls it transformative education. According to Manning and Baruth, education that is multicultural and social reconstructionist incorporates curricular emphasis on active student involvement in social issues such as sexism, racism and classism, on the development of problem-solving ability and political action skills, and on curricular adaptations, co-operative learning and decision-making skills.<sup>23</sup>

In addition to the five types of multicultural education identified by Sleeter and Grant, other phrases have been used to call for educational reform, especially with reference to minority groups. "Culturally congruent education"<sup>24</sup> implies a kind of one-to-one correspondence between the home and school environment. "Culturally appropriate education"<sup>25</sup> connotes being culturally appropriate or proper. It requires effort on the part of the teacher to avoid *faux pas* that would jeopardise the learning process. Education that is "culturally compatible"<sup>26</sup> matches the students' culture with educational practices to ensure academic success. "Cultural responsiveness" as referred to by Erickson<sup>27</sup> involves an effort by the school to "reduce miscommunication, foster trust and prevent the genesis of conflict that moves rapidly beyond intercultural misunderstanding to bitter struggle of negative identity exchange"<sup>28</sup> between students and teachers. "Assimilationist teaching" represents the dominant culture and attempts to transmit that culture's beliefs and values to others in order to assimilate them.<sup>29</sup> This kind of teaching is used in English classes for foreign students, for example, when students are expected to learn and adopt western communication and socialisation patterns in order to succeed. Ladson-

Billings adds that this approach to teaching serves “to induct students into the role that society has determined for them with an unquestioning, uncritical view of the way schools miseducate all children, minority and non-minority, females and males, middle-class and working and lower-class, disabled and non-disabled.”<sup>30</sup>

All of the approaches to multicultural education discussed generally refer to changes in education that are formulated to benefit people of colour. The main goal is basically the same: to develop competencies, including knowledge, skills and attitudes, necessary to live within the individuals’ own ethnic culture as well as within and across other ethnic cultures. It often fosters respect for a wide range of cultural groups. The main goal of multicultural education, as stated by specialists in the field, is “to reform the school and other educational institutions so that students from diverse racial, ethnic, and social-class groups will experience educational equality.”<sup>31</sup>

### **Culturally Relevant Education**

There has been much writing in the past 20 years about multicultural education, but one of the more recent terms introduced in the literature is “culturally relevant education.” Although the concept of culturally relevant education is as old as education itself, the term was coined by Ladson-Billings in 1992. She describes it as education that

serves to empower students to the point where they will be able to examine critically educational content and process and ask what its role is in creating a truly democratic and multicultural society. It uses the student’s culture to help them create meaning and understand the world. Thus, not only academic success, but social and cultural success are emphasized by the culturally relevant teacher.<sup>32</sup>

Gutstein describes it as

a pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills and attitudes. These cultural referents are not merely vehicles for bridging or explaining the dominant culture, they are aspects of the curriculum in their own right.<sup>33</sup>



Culturally relevant education has been practised for centuries in the home, schoolhouse, church and mosque where education has historically taken place. However, with the institutionalisation of education and the mass production of educational materials for students over wide geographical areas, much of the relevance of education to many students has been lost. It is not the goal of culturally relevant education to reproduce the home environment or culture, but to prepare students to meet their needs on individual, societal and global bases. As Hirsch asserts, "To thrive, a child needs to learn the traditions of the particular human society and culture it is born into."<sup>34</sup>

Culturally relevant teaching is an approach that is compatible with the students' culture in ways that will make an educational programme effective. It uses the students' culture and previous knowledge as a starting point from which meaning is created and an understanding of the world is fostered. It is learner oriented rather than teacher or material oriented. Rather than attempting to insert culture into the curriculum, it begins with the culture and builds education around it. Culturally relevant teaching is "part of a broader set of pedagogical orientations, dispositions and practices that foster a critical approach to knowledge, help students question the authority of adult perspectives, and promote democratic practices in the classroom."<sup>35</sup> It gives students the tools necessary for active and conscious participation in society.

Gladson-Billings contributes significantly to describing culturally relevant education, although it is difficult to separate from what many call "just good teaching."<sup>36</sup> However, a careful study of teachers whose minority students excelled academically, despite nationwide trends to the contrary, resulted in her description of culturally relevant pedagogy. Her findings are reinforced through other studies, such as those by Nelson-Barber and Estrin,<sup>37</sup> Lipka,<sup>38</sup> Osborne,<sup>39</sup> Gutstein,<sup>40</sup> Jordan,<sup>41</sup> Sheets,<sup>42</sup> and Howze and Smith,<sup>43</sup> who discuss education for Native Americans, African Americans, Yup'ik Eskimos, Mexicans, Hawaiian children and other cross-cultural and interethnic classrooms in North America and Australia. They identified five components of culturally relevant education – the social and historical contexts, the

teacher, the student, the classroom culture and the instructional material – and define what comprises each component.

*Social and historical contexts.* The social, historical and political contexts of a society determine to a large extent the students' experiences. Since they are valuable sources of classroom knowledge, these contexts must be understood well by the teacher. The social and historical contexts, when referred to in the classroom, can enable students to recognise the gap between the ideal and the real and to guide them to practical, student conceived resolutions of problems within their society. Irvine<sup>44</sup> identified three levels of social contexts that should be considered. Micro-level classroom interactions, mid-level institutional context (school policies and practices) and macro-level societal contexts. All contribute to the social context around which education should take place. Speaking of American culture, Hirsch identified three domains of a national vocabulary; these reflect the social and historical context of the curriculum and should be incorporated into it.

The first is international. Basic literacy in the contemporary world requires knowledge of certain terms known by literate people everywhere in the world, no matter what language they speak. This core lexicon of modern education includes basic words from world history, world cultures, geography, and the physical and biological sciences....

Lying beyond the core is the sphere of vocabulary needed for literacy in English, no matter in what country the language is used....

But in addition to broadly shared, international spheres of knowledge, every literate person today has to possess information and vocabulary that is special to his or her own country.<sup>45</sup>

By understanding not only the local vocabulary, but also the historical, political and social contexts of a culture, the teacher can draw on issues and ideas that students themselves find meaningful and that can contribute to an education that is relevant to them on several levels.

*The teacher.* Culturally relevant teachers are described by Gutstein,<sup>46</sup> Osborne,<sup>47</sup> Delpit,<sup>48</sup> Sheets,<sup>49</sup> Ladson-Billings,<sup>50</sup> Nelson-Barber and Estrin,<sup>51</sup> and Lipka.<sup>52</sup> Such teachers have four basic traits: they are knowledgeable of the culture of their students, they express solidarity with the people of that culture, they are



academically challenging, and they are respectful and affectionate towards the students.

Although it is likely that a culturally relevant teacher is of the same culture or subculture of the students, it is not necessary. Culturally relevant teachers have knowledge of the culture and student's experience, and feel that they are valuable sources of classroom knowledge. They try to find ways to match their teaching styles to the culture and home background of their students. This kind of teaching reduces miscommunication, fosters trust and prevents conflict.

The culturally relevant teacher expresses solidarity with the people of the culture. He is the teacher whose conceptions of himself and others reflect belief in and commitment to students and their communities. Culturally relevant teachers are described as those that "believe that success is possible for each student and a part of that success is helping students make connections between themselves and their community, national, ethnic and global identities."<sup>53</sup> While the teacher recognises aspects of the culture that may hold the students back, they do not pathologise students, families and communities. Delpit<sup>54</sup> disapproves of teachers with a "messiah complex" who believe they have a mission to "save" children from their families and communities. The culturally relevant teacher instead adopts solidarity with the student and helps them face and overcome societal shortcomings in a realistic, non-patronising way.

Culturally relevant teachers are warm, respectful and academically challenging. They are strict, yet affectionate, and they have profound faith in their students. They believe it is their role to inculcate in their students a desire to learn, to motivate students and to make them believe they can learn. They develop personal and social agency in their students by drawing on issues and ideas that the students themselves find meaningful.

Ladson-Billings studied educators who were identified as excellent teachers of minority students and described them as those who "demanded, reinforced and produced academic excellence in their students. Thus, culturally relevant teaching

requires that teachers attend to students' academic needs, not merely to make them 'feel good.' The trick of culturally relevant teaching is to get the students to 'choose' academic excellence."<sup>55</sup> However, academic success is not the sole measure used by culturally relevant teachers; social and cultural success is also emphasised. They have high expectations of students and are concerned with them as individuals. They develop good rapport with their students, and they are concerned, empathetic and dedicated teachers.

*The student.* Students in culturally relevant educational encounters understand that bilingualism or biculturalism is an advantage, not a hindrance. They are encouraged to examine their conception of themselves and others and to question the authority of adult perspectives.

*The classroom culture.* Adapting the culture of the classroom and school toward the students' culture increases students' comfort by using their prior knowledge and by engaging them in familiar discourse style. Hall<sup>56</sup> identified three approaches to culture: man to object, man to man and man to group. While the man to object orientation is common to European and North American peoples, man to man or man to group orientations are common among coloured people. Approaches to education that work for people with this orientation involve group work, indirect management control and unhurried lessons; spotlighting should be avoided.<sup>57</sup> When students' orientations are considered and adjustments in the curricula are made to accommodate them, the classroom culture becomes more culturally relevant.

The culturally relevant classroom culture is based on common respect for the cultural values, social organisation, and discourse patterns practised by members of that culture. It forms the basis upon which learning is developed. Relations are equitable, reciprocal and foster community.<sup>58</sup> Bilingualism and biculturalism are encouraged and competencies in both are fostered. Students are encouraged to maintain their cultural identity as well as academic excellence. They are not expected to "act white;" they can be themselves.



However, they are taught to become aware of broad socio-political consciousness so they can critique cultural norms, values and institutions. The culturally relevant classroom is conducive to Bellah's fourth cultural perspective, the "comparative perspective,"<sup>59</sup> whereby students can learn from cultural models different from their own while maintaining awareness of their own culture. The culturally relevant classroom is a safe place to explore alternatives and voice opinions, where traditional ways are neither unconditionally maintained nor completely replaced.

In the culturally relevant classroom, parents should be involved.<sup>60</sup> The teachers do not promote the concept of saving the children from themselves, their families or their societies, but show their solidarity with the students. There is a high respect for the students and their parents. The teachers neither romanticise nor pathologise the culture; they look at it realistically and see the strengths and limitations that are common in the culture. They are neither paternalistic nor antagonistic, but realistic.

*The material.* The materials used in culturally relevant education should enhance the students' self-concept, maintain interest in the classroom learning, and provide examples, vocabulary and models students can relate to. The focus should be on analysis and critical thinking. Knowledge is shared and collectively constructed, viewed critically, multifaceted, and built on student's informal knowledge, culture and experience.<sup>61</sup> Cultural referents are integrated into the curriculum to impart knowledge, skills and attitudes. They include not only recognisable cultural objects but also relevant history or cultural practices, "not merely [as] vehicles for bridging or explaining the dominant culture: they are aspects of the curriculum in their own right."<sup>62</sup> The material should be academically challenging and should not romanticise the culture by being presented in folkloric style. The content should be culturally relevant to previous experience, foster natal cultural identity and empower the students with knowledge and practices to operate successfully in mainstream society.

## Conclusion

In our global society, some form of multicultural awareness is essential. It takes many forms, its goals are diverse, and each serves to improve education for youth, particularly children of colour. However, whether education is multicultural or not, every child is entitled to an education that is relevant to the culture of which he is a part. It is the only kind of education that prepares him for his future role in his community based on its history, its present reality and its future needs.

With the components of culturally relevant education detailed in Chapter Three, Chapter Four lays the foundation for a culturally relevant approach to instruction for information literacy for Kuwaiti children. In order to identify further a culturally relevant approach to education, it explores the culture of Kuwait in terms of its identity as a unique and independent nation, a Gulf country, an Arab country, an Islamic country and a developing country. In addition to offering some insight to the historical, political, developmental and social aspects of Kuwaiti culture, some problems facing the future of Kuwait are touched upon to provide some direction for the education of Kuwait's youth. In addition, library and information services as they relate to Kuwait's identity are discussed to present issues of vital concern in the development of a programme of instruction for information literacy for Kuwaiti students. With a general profile of Kuwait offered in Chapter Four, a more detailed description of libraries and instruction for information literacy in Kuwait follows in Chapter Five.



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## **Chapter Four**

### **Profile of Kuwait**

#### **Introduction**

The following pages provide a description of Kuwait as a nation, as a Gulf country, as an Arab country, as a Muslim country and as a developing country. Each of these factors of Kuwaiti identity is explored in an attempt to define what is culturally relevant to a Kuwaiti citizen in order to develop an instructional programme for information literacy that is relevant on multiple levels – from family life to global issues. The purpose of Chapter Four is not to provide a detailed description of Kuwaiti society and culture, which has been achieved by several authors.<sup>1</sup> In consideration of space limitations and in order to avoid superficiality in curriculum development, a deeper analysis of the underlying character of Kuwait is sought on several levels.

#### **Kuwait as a Nation**

Kuwait is an independent state on the north-western coast of the Arabian Gulf, also known as the Persian Gulf. It is bordered on the south by Saudi Arabia, on the north and west by Iraq and on the east by the Arabian Gulf. The borders with Iraq were officially demarcated by a special United Nations Demarcation Commission in 1992, finally dispelling any validity in Iraq's territorial claims over Kuwait. There is a partitioned neutral zone between Kuwait and Saudi Arabia, the northern half of which is administered by Kuwait.

Virtually all of the uninhabited area of the country is barren desert. Its terrain is mainly arid steppe, a type of desert that varies from clay and gravel to loose sandy ground. Petroleum and natural gas are Kuwait's only natural resources. Its only reserves of pure drinking water are two wells in the north; most of the country's water is supplied from the desalination of seawater. The average annual rainfall is

127 mm or less, and average temperatures range from 8°C in winter to 45°C in summer.

While flora is limited to mainly drought tolerant species which can thrive in highly saline soil, Kuwait's urban greenery is maintained by the government's landscaping plan. Kuwait has a rich marine environment, home to more than 200 species of fish, but wildlife is limited due to the harsh climate; many species, therefore, are migrants through Kuwait, especially birds. Lizards, snakes, insects and small mammals are regularly seen, as well as a variety of birds. Cheetahs and ostriches roamed the area a hundred years ago, as well as desert rabbits, gazelles and wolves, which have been eliminated by urbanisation and over-hunting.

Little is known of Kuwait's early history. The earliest indication of human presence is the discovery of tools dating from about 8000 BC in parts of Kuwait. Excavations on Failaka Island indicate that it was part of the Bronze Age Dilmun civilisation and a centre of international trade between 2200 and 1800 BC.<sup>2</sup> Macedonian Greeks under Alexander the Great colonised the island of Failaka in the third century BC, the temple of which can still be seen. Excavations in 1999 on mainland Kuwait uncovered graves dating from 5000 BC.<sup>3</sup>

The foundation of modern Kuwait dates from 1613<sup>4</sup> when Kuwait City was established by the Utub tribe who migrated from central Arabia. The manuscripts of the British Archives show that by 1716 the al-Sabah family had been elected to administer justice and the affairs of their trading settlement, thus founding the al-Sabah dynasty which continues to rule. Kuwait's relations with the British began in 1775 when the East India Company transferred its mail route from Basra to Kuwait. To counter Ottoman and German influences, Kuwait obtained British protection under the Anglo-Kuwait treaty of 1899. Full independence was achieved in 1961 when the treaty was terminated. Kuwait joined the Arab League in 1961 and the United Nations in 1963.

The constitution of Kuwait, ratified in November 1962, states that Kuwait is a hereditary Emirate with a system of government that is "democratic, under which



sovereignty resides in the people, the source of all powers.”<sup>5</sup> The system of government in Kuwait, which is considerably influenced by Islamic Shari’ah Law, is based on a separation of power: executive power is vested exclusively in the Emir and his Cabinet of Ministers and the legislative authority is vested in the Emir and the National Assembly, which comprises 50 people elected to four-year terms. The Emir used his authority to dissolve the assembly in 1976, 1986 and 1999 and hold elections for seats in a new assembly. A 1999 Emiri decree granted women the right to vote in the 2003 elections for the National Assembly.

Although Kuwait aided Iraq against Iran in their ten-year war with nearly US\$ 5 billion in cash grants, Iraq revived a long-standing territorial dispute with Kuwait in 1990 which eventually led to the invasion of Kuwait on August 2 of that year. Its subsequent occupation lasted seven months, during which many citizens were robbed, tortured, raped, killed, or taken prisoner, many until this printing. A United States-led coalition succeeded in liberating Kuwait by late February 1991. The retreating Iraqi troops blew up oil installations, set 727 oil wells on fire and rendered power and water distillation plants inoperative. The last oilwell fire was extinguished in November 1991. Kuwait’s losses amounted to \$60 billion in revenues and direct damage.<sup>6</sup> Since the liberation Kuwait has become dependent on the West for military support and has entered into defence agreements with major powers, including the USA, the UK, France, Russia, Italy and China.<sup>7</sup>

Kuwait depends almost entirely on petroleum for its domestic development and foreign exchange. Kennedy outlines the five main characteristics of the Kuwaiti economy:

- It depends on oil for a large portion of national income
- It relies on imports to satisfy most of its requirements for goods and services
- There are few trade barriers between it and the outside world
- It has limited domestic investment opportunities, and
- It incorporates a high level of welfarism.<sup>8</sup>

The state owns the oil companies, whose production of crude oil, gas and refined products accounts for nearly half of the GDP and more than 94% of exports.<sup>9</sup>

Fortunately, foreign investments have accumulated to reduced Kuwait's dependency on oil production.

Although Kuwait is one of the richest countries in the world according to per capita, the economy is inherently inefficient. In the World Bank's 1993 report, two major sources of inefficiency were outlined: "(a) overstaffing in the public sector which has resulted in low productivity in the Kuwaiti labour force, and (b) excessive protection and subsidies provided to Kuwaiti businessmen which has given rise to an inefficient private sector."<sup>10</sup> The World Bank recommended encouraging Kuwaiti employment in the private sector instead of overpaying undemanding positions in the public sector and initiating reforms to create competitive markets. Currently, over 90% of the Kuwaiti workforce is employed in the public sector with a large number of young Kuwaitis entering the job market. With the government unable to accommodate them, young Kuwaitis, who are often reluctant to take up employment in the private sector, are experiencing high levels of unemployment. Al-Onaizi describes two types of unemployment among Kuwaitis: actual unemployment, or citizens with no jobs, and masked unemployment, or citizens who work in jobs unrelated to their qualifications.<sup>11</sup>

The population of Kuwait in 1998 was 2,270,865, of which 34.6 % was Kuwaiti.<sup>12</sup> Non-Kuwaiti residents, numbering nearly 1.5 million in 1998, represent 100 countries,<sup>13</sup> including mainly Arabs from other countries, Indians, Pakistanis, Iranians and, most recently Asians who, according to Clements, are considered "less politically sensitive and less likely to settle in Kuwait."<sup>14</sup> Prior to 1990 native Kuwaitis comprised only about 25% of the population; this figure rose to nearly 35% by 1998.<sup>15</sup> The ratio of Kuwaitis is expected to rise even further in response to several measures currently being undertaken by the government to achieve and maintain at least a marginal majority of native residents, including the recent granting of citizenship to hundreds of children of Kuwaiti widows, divorcees and naturalised parents.



Labour research in 1998 revealed that Kuwaitis represent 93.4% of the workforce in the public sector, and only 1.7% of the private sector.<sup>16</sup> Kennedy explains the predominance of expatriates in the private sector “by the preference of employers for their superior work ethic and the relatively low wages they are prepared to accept.”<sup>17</sup> While the government is keen to reduce the expatriate labour force, Clement states that it is “dependent upon Kuwaitis being prepared to undertake jobs which hitherto have been considered too menial.”<sup>18</sup>

Kuwait has one of the best-educated populations in the Arabian Gulf region and boasts an overall literacy rate of approximately 90 percent.<sup>19</sup> Kuwait operates a national educational system, whereby the educational process is defined, implemented and controlled by the state. In 1995, 6.1 percent of Kuwait's gross national product was spent on education.<sup>20</sup> School attendance is compulsory for all Kuwaiti children between the ages of six and fourteen, and is free-of-charge from pre-primary through university levels. Attendance at public schools, however, is restricted to Kuwaiti children, the children of teachers working for the Ministries of Education and Higher Education and selected professionals; expatriate children must be educated privately at one of the more than 100 foreign schools in the country. All public schools include religion in their basic curricula, as do private schools for Muslim students. All students in Kuwait must take Arabic language, and all students of Arabic schools must take English language beginning at the primary level. Consequently, English is widely spoken in the country, especially in the business environment, even though the official language is Arabic.

Tertiary education is regulated by the Ministry of Higher Education. Kuwait University, opened in 1966, has an annual enrolment of about 20,000 students and more than 2000 Kuwaiti students study abroad each year.<sup>21</sup> Vocational training and adult education is provided by the Public Authority for Applied Education and Training (PAAET), which has four full-time colleges and 24 field and industrial training centres. There are also several private institutions that offer courses in languages, computing, and business studies. Although the enrolment at PAAET numbers approximately 15,000 annually,<sup>22</sup> Lambert notes that Kuwait is “seriously

lagging behind many countries in the world in applied technical or vocational training....The Kuwaiti social structure has a negative attitude toward manual labour of any kind and toward vocational and non-managerial work in particular.”<sup>23</sup> He feels that while much remains to be accomplished in regard to Kuwait’s evolving educational system, the government’s commitment to educating its people demonstrates foresight and dedication to long-term growth and prosperity.

Kuwaiti society revolves around the family. The Kuwaiti family is generally very closed and private, consisting of a closely-knit extended family circle, some of whose members may be only distantly related. Men and women generally meet separately for socialisation. Men meet in the traditional ‘diwaniyah,’ or parlour. It is an indoor or outdoor meeting place furnished with wooden benches and/or colourful cushions generally placed end-to-end to form a square of some sort. Much business is conducted in diwaniyahs, as is political discussion and information exchanges. Al-Othaimeen remarks that the diwaniyah is one of the most important social institutions in Kuwait: “For the individual, the *Diwanniah* is the place not only for social gathering but also for establishing the personal connections with government officials. For the government the *Diwanniahs* are not only places for measuring public opinions, they can sometimes form a threat when people start lobbying against government matters. During the Iraqi invasion, the *Diwanniah* network was the organizational structure which helped organise the underground resistance.”<sup>24</sup> While the women are assigned the traditional roles in the home, they also enjoy the freedom to pursue outside interests that are made possible by the availability of domestic servants.

The traditional character of Kuwaiti people is best summarised by Seery:

Their roots lie with the desert or the sea or both. The forefathers of today’s Kuwaitis were merchants, plying their trade as far as India, Ceylon and Africa; or shipbuilders, crafting the traditional sailing boats which were renowned throughout the region; or pearl divers, spending months of the year at sea working the oyster beds; or bedu, roaming around the desert, seemingly at will, but in fact governed by the seasons and by agreed tribal grazing rights. Or, as the Kuwaitis themselves would have it, they descend from either meat-eaters (bedu) or fish-eaters (seafarers). Through all the changes and rapid developments of the 20<sup>th</sup> century, Kuwait’s people have stayed true to their cultural virtues of hospitality, courtesy and respect.<sup>25</sup>



Although Kuwaitis have long abandoned sailing, pearling, fishing and shipbuilding as a basis of their economy, the sea is still an important part of Kuwaiti life as a source of nourishment and countless recreational activities.

Traditional Bedouin crafts include weaving, or Sadu, originally used for tents and furnishings. Designs are still based on combinations of plain and patterned vertical stripes or continuous bands of interlocking triangles. The al-Sadu foundation was established for the preservation and encouragement of traditional handicrafts. Falconry, also once essential to desert life, has lost prominence in Kuwaiti traditional life, although a few Kuwaitis practice it as a hobby.

### **Kuwait as a Gulf Country**

Kuwait is situated on the north-east tip of the Arabian Peninsula, known as Jazirat al-Arab (Island of the Arabs), or simply as Arabia. It is the original homeland of the Arab population in the Middle East, of Arabic language and culture and of the religion of Islam. Arabia, one of the most sparsely inhabited areas of the world, comprises the independent states of Saudi Arabia, Yemen, Oman, the United Arab Emirates, Qatar, Kuwait and Bahrain. The waters bounding it are the Gulf of Aqaba, the Red Sea and the Bab el Mandeb on the west; the Gulf of Aden and the Arabian Sea on the south; and the Gulf of Oman, the Strait of Hormuz and the Arabian Gulf on the east.

Recent archaeological exploration has revealed that south-west Arabia supported three ancient kingdoms. The Minaean Kingdom existed from 1200 to 650 BC, the Sabaean Kingdom was founded about 930 BC and lasted until about 115 BC, and the Himyarite Kingdom lasted from about 115 BC to 525 AD.<sup>26</sup> Arabia has historically been a focal point of caravan routes between seaports of the Mediterranean and the Hadhramaut region on the south-eastern tip of the peninsula.

Because the Gulf states are a major supplier of oil to the world, and because the cities of Mecca and Medina are the spiritual centres for more than a billion Muslims

throughout the world, Arabia has become increasingly important in recent years. As David D. Newsom, then US under-Secretary of State for Political Affairs, said in 1980:

If the world were a flat circle and one were looking for its center, a good argument could be made that it would lie in the Gulf... Nowhere in the world today is there quite such a convergence of global interests. No area is quite as central to the continued economic health and stability of the world.<sup>27</sup>

The countries of the Gulf have several characteristics in common: geographic proximity, linguistic harmony, socio-cultural fraternity, environmental and ecological identity, similarities in developmental status and needs and widespread technological applications.<sup>28</sup> In recognition of these commonalities, the Gulf

Cooperation Council (GCC) was formed in 1981. Its charter states:

In recognition of the special ties which bind each of the United Arab Emirates, Bahrain, Saudi Arabia, Oman, Qatar and Kuwait to one another, arising from their common ideology and heritage and the similarity between their social, political and demographic structure, and out of desire to promote their people's prosperity, growth and stability through closer cooperation, the foreign ministers of these states met... [to draw up] a practical framework for the consolidation and development of cooperation between the states concerned.

...It shall be a means of achieving a greater degree of coordination and integration in all fields and of forging closer relations between its members. To this end it will from corresponding organizations in the field of economics and finance, education and culture, social affairs and health, communications, information and media, nationality and passports, travel and transportation, commerce, customs and the movement of goods, and finally in legal and administrative affairs.<sup>29</sup>

The GCC is one example of the global trend towards larger regional units such as the European Union (EU) and the Association of South East Asian Nations (ASEAN). Matthew has observed that "it has succeeded to a large degree in the arena of regional politics, but still has a long way to go to reach the high degree of economic cooperation as described by the more visionary early officials of the GCC."<sup>30</sup> The GCC recently has shifted its focus from political to economic challenges and has started to question its reliance on government spending as the prime motivator of the economy. Direct government patronage is beginning to decrease, which is evidenced by Kuwait's recent implementation of health tax and the cancellation of government-subsidised gasoline, water and electricity, resulting in significant price increases.



Over the past several decades the Gulf states have achieved a fair amount of development. They have succeeded, at least partially, at absorbing the sudden wealth that oil has brought without destroying their traditional values and identity. However, they have been challenged and western lifestyles are spreading. For this reason, Shaw feels that 'cultural nationalism,' which responds to a crisis of identity and purpose, is an aspiration as appropriate as political nationalism. "Just as the Gulf States need, for respect at the international negotiating table, to reject political subservience, so, too, they need to reject cultural subservience."<sup>31</sup> Gulf states, therefore, should seek to recover the creative force of their people which serves to define their culture in art, folklore, history and archaeology, tradition, literature, language, and so on.

It is with respect to productive culture that Gellner distinguishes between states and nations. He defines states as those which have achieved political recognition and nations which, in addition, are distinguished by a confident, authentic and productive culture.<sup>32</sup> A shared cultural identity, combined with creative energy and commitment among Gulf states' citizens is necessary if they hope to compete in the world economy, guarantee economic growth in their countries, and represent themselves as sophisticated and confident people with firm roots. Educational institutes have a central role to play, as do the arts, the media and scholarship, by building the culture into the consciousness of each generation, critically reviewing it in the process.

Shaw expresses doubts that this can be achieved under the present conditions.

Oil has divided rich from poor and created a dependent middle class which does not welcome change, only a share in wealth and security. It has also led tribal groupings to become clients of the governments, whilst the latter see themselves as distributors of, rather than creators of wealth. There is thus little widespread appetite for reform and democracy.<sup>33</sup>

In addition, the GCC is facing a major challenge of population growth. Matthew reports that 52% of the national populations are under 20 years old<sup>34</sup> and will soon start to look for work. In Kuwait, 63% of the citizens are under 25 years of age.<sup>35</sup>

This will fuel the move to localise the work force, driving out expatriates from the jobs they currently hold, but it will also mean that the GCC governments

will have to create new jobs, which means new companies and new industries. This will have some major implications because the governments will be unable to provide all these jobs. The private sector will have to do most of the job creation, which means that the countries will have to become more open to investment and trade. The full implications of this are only now beginning to be felt at an academic and research level, and will start to trickle into government policy over the next five years.<sup>36</sup>

Gulf states have traditionally employed a very large expatriate work force which serves mainly as teachers, manual labourers and domestic help. Not only do they do undesirable jobs, they are less well paid, have few rights and need not be rehired at the end of short contracts. However, these short-term benefits to Gulf people lead to more lasting problems with respect to employment, cultural solidarity, and long-term development and growth.

Addressing these issues is the recent policy of the indigenisation of the workforce among Gulf states, called 'Kuwaitisation' in Kuwait, which seeks to substitute Kuwaiti employees for skilled expatriates. This policy, adopted in 1991 and aimed at keeping the expatriate workforce below 35%, is an attempt to correct the problem of internal waste caused by the poor use of native talent, a form of brain drain. However, if indigenisation is undertaken carelessly it can undermine the developmental issues it is designed to promote. It must, therefore, ensure that the local substitutes have the necessary skills and training to undertake professional work, that indigenisation is encouraged at all levels, creating jobs for poorly educated segments of society, and that the attitudes and commitments expected of certain careers are fostered.

Shaw believes that the indigenisation of staffing in higher education institutes is a high priority

so that local culture and identity can be supported by the formation of an intelligentsia, which, 'is of the essence of the cultural problem, since only the intelligentsia is capable of helping a society to become conscious of itself and take on board its own modernisation.'<sup>37</sup> Particularly in the arts, humanities and social sciences, it is important that higher degree students who go abroad for study should as far as possible, plan their research in the foreign university, but carry out the empirical fieldwork back in the realistic conditions of the Gulf where the implications force themselves upon the researcher.<sup>38</sup>



The indigenisation policy is a hopeful sign that the Gulf is undergoing an economic and cultural reawakening and that its citizens will regain confidence in their own society, traditions, culture and institutions and, hence, in themselves.

### **Kuwait as an Arab Country**

There are about 250 million Arabs living in 22 Arab countries including the Arabian Gulf states, Syria, Jordan, Lebanon, Iraq, Egypt, Libya, Algeria, Morocco, the Sudan and Tunisia. 'Muslim' and 'Arab' are not synonymous. Only one quarter of the world's one billion Muslims are Arabs and 5% of Arabs are not Muslim. Hence, there are Arab Christians and Jews, and Turks and Iranians, although mostly Muslims, are not Arab. All Arabs consider the Arabian Peninsula their ancestral home. The Arabic language is the main symbol of cultural unity among Arabs, but the religion of Islam provides another bond for the majority of Arabs.

The cultural and scientific contributions of the Arabs to Western civilisation during the Middle ages were highly significant. During the Dark Ages of Europe, much learning was preserved for the world through the Arab libraries in the universities of Morocco (Fez), Nigeria (Timbuktu) and Egypt (al-Azhar). Words such as orange, sugar, coffee, sofa, satin and algebra are of Arab origin, and thousands of Arab contributions have become an integral part of human civilisation, especially in astronomy, mathematics, medicine and philosophy. Table 4.1 lists some of the prominent personalities, inventions and concepts of Arab origin.

**Table 4.1**  
**Scientific Contributions and Personalities of Arab Origin<sup>39</sup>**

<u>Subject</u>	<u>Prominent personalities</u>	<u>Inventions or concepts</u>
Mathematics	Al-Khwarizmi (algebra)	Zero Arabic numerals Decimal system
Astronomy	Al-Biruni Al-Fezari Al-Farghani Al-Zarqali	Astrolabe Longitude and latitude Magnetic compass
Medicine	Al-Razi Ibn Sina (Avicenna) Al-Maglusi Ibn Al-Nafis	Contagion Mental health Capillary system Pulmonary circulation
Navigation and Geography	Al-Idrisi Ibn Batuta	World atlas Travellers' information
Botany	Ibn Al-Awam	Grafting and plant care
Engineering	Musa ibn Shakir's sons	Technology
Optics	Al-Kindi Al-Haytham (Alhazen)	Tides, optics Optics, microscope, telescope
Philosophy	Ibn Rushd (Averroes)	Meaning of existence

The history of the Arab peoples since the founding of Islam may be divided into two major periods: that of the caliphate from 632 to 1924 and the era of modern Arab nationalism since 1924.<sup>40</sup> For several hundred years after the death of the Prophet Mohammed, Arab influence spread throughout the Middle East to parts of Europe, particularly Sicily and Spain, to sub-Saharan Africa, to the subcontinent of India and



to Madagascar and the Malay Archipelago. Early in the 16<sup>th</sup> century the Ottoman Turks conquered the Arab-controlled territories. The Ottoman Empire was dismantled after World War I and the caliphate was abolished by the new Turkish government in 1924.<sup>41</sup> At that time Arab nationalism began to grow, inspired by European ideas of nationhood.

Although the Arab's common adherence to Islam ideally transcends national boundaries, several organisations have been founded to consolidate Arab unity. These include the Arab League, founded in 1945 to strengthen and co-ordinate political, military, economic, cultural and social programs; the Arab Maghreb Union, comprised of Algeria, Libya, Mauritania, Morocco, and Tunisia, formed in 1989 to boost trade between member countries; the Arab Cooperation Council, created in 1989 by Egypt, Iraq, Jordan and North Yemen, and the Gulf Cooperation Council of 1981.

The Arabic language is of Semitic origin and is spoken by at least 150 million as a mother tongue and several million more as a second language. Arabic is rich in vocabulary, which easily lends itself to rhyming and couplets. Historically the Arabs have a rich oral tradition based on the recitation of poetry and stories of tribal valour. The poet, both revered and feared, was a strong political influence in the community. Arabic calligraphy, especially Quranic, is a high art form in the Arab world and is a significant mode of decoration.

Perhaps the best way to describe Arab culture is to compare and contrast it to Western culture. Arab and American cultures are so different that most intercultural scholars tend to view them as cultural opposites.<sup>42</sup> While there are, of course, individual differences across 21 Arab countries, the general tendencies in Arab culture emphasise form over function. As a popular visitors' guide to Kuwait explains, "Form is very much in evidence. Losing form is an anathema; boosting form is most laudable."<sup>43</sup> Campbell and Zaharna have noted fundamental differences between Arab and American culture, especially as they relate to communication patterns. Such information is important for those who deal with Arabs, especially in educational settings. Campbell<sup>44</sup> finds that while Americans place a high priority on

promptness and getting the job done, Arabs generally feel that “for everything there is a season, a natural timing. If you aren’t willing to take the time to sit down and have a cup of tea with people, you have a problem.” He notes that while Americans define themselves by achievements, education, job experience or position, Arabs define themselves by who they are related to and know well, and diplomas and certificates are important documents. In judging individuals, Americans emphasise one’s record, influence and power, while Arabs emphasise the family, one’s image and reputation. Competition among Americans is a healthy motivator, but among Arabs it is not logical – all ‘good’ people should win. While conducting business, Americans avoid social chatting and are eager to start working on the task at hand. Arabs, on the other hand, prefer to take time to get acquainted before business relationships can develop.

Zaharna studied several frameworks for viewing cultural variations between Arabs and Americans, including the work of Hall<sup>45</sup> on low- and high-context cultures, the work of Levine<sup>46</sup> on direct and indirect communication styles, the work of Kluckhohn and Strodtbeck<sup>47</sup> on value orientations, and the work of Dodd<sup>48</sup> on linear and non-linear thought frameworks. Zaharna states that

For the American culture, language appears to be a medium of communication used to convey information. Emphasis is on function and by extension substance, meaning, and accuracy. A message may tend to be valued more for its content than style. For the Arab culture, language appears to be a social tool used in the weaving of society. Emphasis is on form over function, affect over accuracy, and image over meaning. Accordingly, content may be less important than the social chemistry a message creates.<sup>49</sup>

He summarised his findings in a table of cultural variations of messages in American and Arab communication preferences (Table 4.2).



**Table 4.2**  
**Cultural Variations of Messages in American and Arabic**  
**Communication Preferences<sup>50</sup>**

	American	Arab
Socio-Cultural Influences	Legal documentation Record preservation Need for accuracy Technical, concrete Language used to transmit information	Poetry, Islam Nationalism Reliance on symbols Emotional resonance Abstract Language used to create social experience
Hall (1976) Low-context and high-context cultures	LOW-CONTEXT Meaning in message Explicit Include details in message Speaker responsible for message comprehension	HIGH-CONTEXT Meaning in context Implicit Details in context Listener responsible for understanding message
Levine (1985) Communication styles	DIRECT/UNIVOCAL Direct, to the point Clear Simplicity valued Objective (avoid emotion)	INDIRECT/AMBIGUOUS Indirect, circular Ambiguous Embellishments valued Subjective (deliberately use emotion)
Kluckhohn & Strodtbeck (1961) Value orientations	ACTIVITY / "DOING" Emphasize action, measurable action Tie between word and deed	"BEING AND BECOMING" Emphasis relationship in social context Words for social effect
Dodd (1982) Thought framework	LINEAR One theme Organized with beginning and end Object oriented	NON-LINEAR Not necessary have one theme Organization not stressed People and even oriented
Oral vs. literate dominant societies	LITERATE SOCIETY Written word valued Singular experience Factual accuracy stressed Logic and coherence Speaker detached from audience Analytical reasoning	ORAL SOCIETY Oral experience valued Group experience Imagery and sounds stressed Emotional resonance Speaker and audience linked
Cultural preferences for messages	AMERICAN Simplicity Accuracy Understatement Actions	ARABIC Repetition Imagery Exaggeration Symbols

Thesiger summarises the Arab character as follows:

All that is best in the Arabs has come to them from the desert: their deep religious instinct, which has found expression in Islam; their sense of fellowship, which binds them as members of one faith; their pride of race; their generosity and sense of hospitality; their dignity and the regard which they have for the dignity of others as fellow human beings; their humour, their courage and patience, and the language which they speak and their passionate love of poetry. But the Arabs are a race which produces its best only under conditions of extreme hardship and deteriorates progressively as living conditions become easier.<sup>51</sup>

The situation for libraries in the Arab world has been described by many as a 'vicious circle,' which appears hopeless to those within the library circuit. Buchanon succinctly describes it: "There is a shortage of trained staff, impoverished collections (qualitative and quantitative), and inadequate library premises and equipment. Therefore, libraries become incapable of meeting their users' information needs, thus reducing levels of services as users turn away to other information sources. Libraries are then viewed by officials as less important."<sup>52</sup> This, in turn, results in insufficient budgetary allocations for collections, premises, equipment and staff.

There are larger issues that also affect the state of libraries and information provision in the Middle East. User needs are not measured or met by information agencies in the region and users themselves fail to communicate their needs to the responsible bodies, turning instead to informal channels. Ubaydli has observed that "much of the Arab Eastern life consists of searching for information typically through social networks of trust and mutual obligation, which form its informal structure."<sup>53</sup> While the Internet has provided an alternative to both access to and interpretation of information traditionally controlled by the respective authorities, it may not always provide for the information needs and cultural values of Arabs. More significantly, the Internet is not widespread in the Middle East, severely limiting information-seeking possibilities.

Bibliographic control is another central issue in the information woes of the Middle East. Although the Arabic Books in Print has been published since 1997, only in CD-ROM format, it covers only a portion of all Arabic books published, and while



several national bibliographies are published, they are usually not very comprehensive or updated regularly. Consequently, Anees and Athar's report on scientific information services twenty years ago is still relevant today:

Scientific information services such as abstracting and indexing bibliographies, translations, state-of-the-art reviews and selective dissemination of information (SDI) are services which are not normally provided by national information centres in the Middle East; and where such services are provided they are usually of poor quality.”<sup>54</sup>

Complicating matters is the lack of an organised book trade, which creates a state of dependency on materials obtained from more developed countries. However, the accession of scientific journals, books, monographs, conference proceedings and other materials from outside the Arab world often involves long delays, high postal and tariff charges, foreign exchange complications, and poor postal services. Information provision, therefore, can be described as another vicious circle. With two vicious circles operating against the development of libraries and information, networking is virtually non-existing. As Rehman states, “networking in the Arab world would only be effective when the basic infrastructure of library and information services within each participating nation is developed to an optimal level.”<sup>55</sup>

The problems of libraries and information in the Arab world seem to be symptoms of the poor state of higher education and research in the Middle East. While improvements have been made in the past twenty years, the problems outlined by Naseem still largely apply today:

1. The quality of research on problems of vital importance to the Middle East countries is extremely modest; and research and scholarship within the framework of local value systems and thought processes is virtually non-existent.
2. A good portion of the dissertations earned at home and abroad are on irrelevant or trivial topics.
3. A significant proportion of research on Middle East countries is by non-natives: 90 per cent of all books and papers on the Arab world are by non-Arabs. Thus the major sources of information and analysis available to native scholars and researchers in the Middle East is foreign – and often ethnocentric – scholarship and writing.
4. Areas of research of vital importance to the cultural, social and economic needs of these countries are untouched.

5. A great deal of vital and useful technical and non-technical information is not being absorbed and utilized by Middle East scientists for unknown, and a variety of known, reasons.

This situation is likely to continue as long as Middle Eastern countries rely on Western universities to train their scientists and the educational system itself remains an embodiment of Western culture and values, priorities and emphases.<sup>56</sup>

It seems that changes in the educational systems, particularly in higher education, are important if information generation, utilisation, documentation, organisation, transfer and delivery are to improve, eventually manifesting in well-stocked libraries run by sufficient numbers of highly qualified staff providing access to all types of information, especially that which is highly relevant to the users' needs. In this respect, it seems that progress is being made. Many schools of library and information studies have opened recently in the region, both on the graduate and post-graduate levels, and automation within university, special and private school libraries is becoming more widespread, creating possibilities for greater co-operation.

### **Kuwait as an Islamic Country**

Kuwait is part of the Muslim World, which refers to the area whose inhabitants are predominantly Muslim. The Muslim World extends from the Atlantic Ocean across North Africa, the Middle East, and Southern and Central Asia to the Pacific Ocean. Within this long, continuous band are the countries of Morocco, Algeria, Tunisia, Libya, Egypt, Sudan, Turkey, Albania, Syria, Iraq, Iran, the Arabian Gulf states, Afghanistan, Pakistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Bangladesh, Malaysia and Indonesia, all of which are considered developing countries.<sup>57</sup> The Muslim World shares basic beliefs, language, a common history, value structure, religious and social events and archetypes. Husain and Ashraf acknowledge the fact that in certain areas the ruling authorities have constitutionally replaced the norm of Islam by 'secularism' or have been rather silent about religion but they believe that the way of life in such countries is still intrinsically Islamic.<sup>58</sup> They explain that "traditional society still forms the basic core of the Muslim world. It still believes in the *Revelations* stored in the



Quran and looks to the Sunnah for interpretation and guidance. It finds in these the primordial traditions and the norm of values with the help of which it sets up the ideal of the 'good man' and the 'good life.'"<sup>59</sup>

However, this basic norm has been challenged in the 20<sup>th</sup> century. The developmental situation in the Muslim world, particularly in the Middle East, has been described as a paradox, a chasm and schizophrenia. Haywood notes that within a few decades of Napoleon's arrival in Egypt in 1798, "the entire Arab world had fallen victim to domination by one western power or another. During this time Arabs grew fascination and repugnance for western technology and culture in the same garden."<sup>60</sup> Husain and Ashraf explain:

Much as the Muslim, anchored in faith, disapproves of the spiritual nihilism of the West, he himself, because of his neglect of science and technology, has created around his society a suffocating atmosphere as oppressive as the spiritual sterility of the West. Want and poverty, disease and epidemic, colonialism and economic humiliation have forced him to realize that it is only by mastering science and technology that he can escape these problems. But when he turns to the West for his knowledge of science and technology, he finds that the whole of it is riddled with premises antithetical to his faith. Modern science and technology would lead him to banish God, to renounce faith, and to commit himself to the pursuit of mindless materialism."<sup>61</sup>

This paradox has created somewhat of a chasm between 'modern' and 'traditional' society. The modern trend is to be empirical in attitude and to doubt the need to think in terms of religion, resulting in more secularist lifestyles. The traditional trend is to reject secularist lifestyles made easy with an empirical frame of reference and, in doing so, reject the empirical attitude as well. The rational Muslim, however, realises that Islam and science are not antithetical, inasmuch as Islam requires the pursuit of knowledge and the application of science not as a goal in itself but as a means to understand the universe, revere its Creator and improve the human condition responsibly. Indeed, the first Quranic revelation began with "Read!" and the Prophet Mohammed stressed that the pursuit of knowledge is obligatory for every Muslim.

The aim of education in Islam is "the balanced growth of the total personality of man through the training of man's spirit, intellect, rational self, feelings and bodily

senses.”<sup>62</sup> Islamic education is concerned with the development of the whole person (body, mind and spirit) within a social context. Such an education leads to the worship of God as well as the careful fulfilment of man’s task of vicegerency on earth.

Western secular education differs fundamentally from Islamic education in the sense that while the former recognises our capacity for sensory and intellectual perception only, the latter recognises that “we have the faculties for a third level of perception, spiritual perception, which is the highest level of perception in the hierarchy of human cognition.”<sup>63</sup> Husain and Ashraf believe that while there can be no question of rejecting modern science and technology, Islamic values must not be lost in the process and that piety and faith must be clearly recognised in syllabuses as an aim to be systematically pursued.<sup>64</sup> They call for a

return to where we started from, that is the discovery of an integrated system of education which will try to impart not only knowledge and information but also values.... What is wanted is an integrated system in which the study of history or mathematics or nuclear physics would not be viewed as representing something utterly discordant with the study of the Quran, and so on.

Such an integration cannot arrive until Muslims themselves have so mastered the diverse fields of knowledge as to be able to produce books imbued with their own beliefs and ideals and assumptions.<sup>65</sup>

The Muslim world clearly is faced with a challenge. Not only must it promote economic growth, but it must also adopt educational systems that not only impart knowledge and information but also maintain or, indeed, rediscover its Islamic values. Furthermore, mere competence may not be enough to meet the challenge; excellence in all fields is called for. Khan explains why this task may be especially difficult:

In spite of the historical fact that Muslims were the torch-bearers of the sciences and have been known to be responsible for the awakening of scientific thought and for the Renaissance in Europe, the Muslim youth of today is led into believing that Islam is against science and development.<sup>66</sup>

The educational systems in the Muslim world need to be examined carefully in the light of the goals of Islamic education if Muslims are to contribute significantly to



world knowledge and discovery. At present, there is some doubt of the efficacy of schools in the Muslim world. Tibawi remarks that

The problem is rooted in Arabic and Islamic practice in the age of decadence when reliance on memory and learning by rote, adherence to existing texts and respect for authoritative opinion became established at lower or higher levels of education. Once the original Arab oral tradition was superseded by fixed written material the teacher's function became more of a restrained transmitter and commentator and less of a resourceful adapter and innovator.<sup>67</sup>

Teaching methods that require students to listen, read and memorise without encouraging critical thought or self-education, are widespread in the Muslim world. These methods were common before the colonial period and since then matters have not improved. Typically, the utmost importance is given to passing examinations while practical training is ignored. The entire educational system is examination-ridden from primary through university levels, failing to foster the leadership and creative thought necessary to address the problems common to developing countries. Teachers are adversely affected, as well, explains Khan:

The dead weight of examinations... tend to curb the teachers' initiative, to stereotype the curriculum, to promote mechanical and lifeless methods of teaching, to discourage the spirit of experimentation, and to place stress on unimportant or wrong things in education.<sup>68</sup>

The education by examination method affords the teachers very little opportunity for the discovery and development of unique or novel solutions to persisting problems.

Lang stresses that if a religious community is to produce leading scholars and scientists, "its approach towards education will have to be compatible with modern critical analytical methods of study; this, I feel, is absolutely necessary. It requires an environment of free enquiry and expression, where self-criticism and objectivity are encouraged and questioning and doubt tolerated."<sup>69</sup> Tahan agrees: "We shall never be able to overcome our weaknesses until they are exposed, discussed, studied and criticized.... The problem is an absence of fair dialogue in an atmosphere of freedom of expression."<sup>70</sup>

Husain and Ashraf describe the road to development in the Muslim world: "What is needed is reform from within, by which we mean a complete revaluation of whatever

learning a modern Muslim young man is called upon to acquire.”<sup>71</sup> The reform that is hoped for is relevant on multiple levels, including the global, the cultural and the spiritual.

### **Kuwait as a Developing Country**

The term “developing country” is synonymous with “underdeveloped country” and “third world country.” These terms generally describe economically developing nations with political instability, high population and large debts. Kuwait falls into this category along with all of Latin America, all of Africa except for the nation of South Africa, and all of Asia except for Japan, Singapore and Hong Kong.

Although its per capita income is higher than Britain’s,<sup>72</sup> Kuwait is classified a developing country because of its economic development. Here the difference between development and growth must be considered. Development is brought in from the outside, while growth is initiated from within. Although Kuwait has shown a great deal of economic development since the end of World War II, they have had very little economic growth, indicated by the emergence of local manufacturing and agriculture that create wealth. Without its oil wealth, it is questionable whether Kuwait could keep itself out of poverty and debt. However, unlike most developing countries, Kuwait is not presently burdened with overpopulation and debt, which makes it a more likely candidate to join the ranks of industrialised countries if it can stimulate and sustain economic growth.

The basic infrastructure of Kuwait was established by the mid-1980s. Airports, docks, highways, housing, health and education facilities and oil-related projects are now largely in place. Kuwait, like most developing countries, has depended on a range of economic and technological relationships with North America and Europe in order to achieve this infrastructure. Sardar explains the dominant features of these relationships: “trade structures based on the import of technology and the export of primary resources, limited national technological capability reflected in low levels of research and development related to local needs and requirements, over-reliance on



foreign assistance, advisors and consultants for selection and management of imported technology, a lack of awareness as to the choices of technologies available, and weak technology-negotiating capabilities.”<sup>73</sup> This amounts to technological dependency, states Sardar, which scientists and technologists have taken for granted, lacking confidence in their abilities and indigenous resources.

Shaw feels that a “period of consolidation” is now taking place as many oil states like Kuwait are recognising the challenges of economic growth.

As the [Gulf] states move to a deeper self-awareness, an appropriately educated, skilled, motivated and attitudinally prepared population to face a competitive world economy is seen as an increasing priority. Higher education institutes are now having to come to terms with this change to human rather than physical investment.<sup>74</sup>

Benge also stresses the human element as an important factor in true progress:

The criteria which are central for evaluating development are not technological but human. If individual resources or qualities are absent or inadequate, sophisticated techniques become irrelevant. It is a matter, not of knowing how to operate machines but of understanding what to use them for and when. Further it is a question not just of the possession of abilities but of a drive to harness them for a social purpose.<sup>75</sup>

Another distinguishing factor between developed and developing countries, according to Haywood, is the “knowledge surplus,” or the currencies earned by selling information, knowledge and intelligence. He states that “the stock of information held by communities and nations at any one time now tends to define their place in the hierarchy of world wealth and power.”<sup>76</sup> Benge feels that the status of the information field reflects the stage of industrial development.<sup>77</sup>

Information, being a result of human activity, is not widely available in developing countries like Kuwait because most human activities are underdeveloped. As Benge states, “Like illiteracy, overpopulation, or epidemics, the absence of reliable information is a symptom of underdevelopment.”<sup>78</sup> He identified several factors that contribute to poor information services, such as information being controlled under authoritarian regimes, a low demand for information due to people seeking information through informal channels, the absence or unreliability of statistics and

basic data, and the associations of information service with domestic service or other demeaning activities.<sup>79</sup> Benge further explains that

Live information will begin to flow when the right persons are installed at key points throughout society. Such informational growth points will include national documentation centres (in both general and special subject areas) newspaper [sic] offices, radio and television stations, industrial firms, commercial organisations such as banks, welfare institutions, government departments, archival agencies, museums, and national institutes of sound and visual records.<sup>80</sup>

In order for Kuwait to continue to advance as a nation to a stage of economic stability and continued growth, the development of the indigenous population is important. This entails adopting educational systems which are not vehicles for recolonising the mind, but which meet their special requirements. Benge warns against students from developing countries studying international umbrellas or conditions within other countries before first considering local situations, believing that “the social context is more important than similar studies in more developed circumstances.”<sup>81</sup> Shaw stresses that “as much research as possible should be done locally, so that experience, including of the need to adapt Western research attitudes and techniques sensitively to local conditions, can be built up and the next generation of researchers locally trained.”<sup>82</sup>

The future of Kuwait, it seems, depends on the quality of its people and their ability to shape the future of their country by adapting creatively to local conditions with a commitment to real development, not mere growth. Encouraging, in this respect, is the fact that in 1999 Kuwait topped all Arab states to rank 35<sup>th</sup> in the world in the area of human development, a 19-place leap over the 1998 ranking.<sup>83</sup> In its struggle to shift economic dependence away from oil, Kuwait’s promotion of human development may lead the way to a promising future not only in the global economy but also in the personal lives of its citizens.



## Conclusion

This chapter has focused on the identity of Kuwait as a nation, as a Gulf country, as an Arab country, as a Muslim country and as a developing country. It has touched upon some of the issues that may be relevant to the provision of library and information skills instruction to Kuwaiti students and that address their unique characteristics and needs. These issues may be summarised as follows:

As a developing country, Kuwait has achieved considerable economic development in recent years, but lacks the economic growth necessary to join the ranks of industrialised countries. The information field is underdeveloped, a reflection of general underdevelopment in productive human activities.

As an Islamic country, the Quran and Sunnah provide the basis for Kuwaiti lifestyles; however, there may be a chasm, or at least some confusion, between traditional interpretations of Islamic living and the modern secularist approaches espoused in the West in the name of science. Islamic education, which incorporates spiritual aspects of human growth into the curriculum, is attempted in the national education system, but is severely undermined by educational methods that do not encourage inquisitiveness, creativity or individuality.

As an Arab country, Kuwait shares a long history of spiritual, cultural and scientific contributions to world civilisation, a rich oral tradition and a love of poetry and calligraphy. In communication, form, affect and image are sometimes more important than substance. Libraries and information services operate within a vicious cycle of underdevelopment.

As a Gulf country, Kuwait shares the homeland of Arabs and Muslims around the world. Its culture and traditions are threatened by foreign influences, partly due to a high expatriate presence. It depends on oil for a large portion of its national income and has an underdeveloped private sector. More than half of the population is under 20 years old, indicating a need for careful planning of future employment, accommodation and education.

As a nation, Kuwait has been for centuries, and still is, a trading centre in the area. It has experienced devastating military conflicts in the recent past, resulting in the recent demarcation of borders with Iraq and defence agreements with several more powerful nations. It is undergoing political development, as indicated by changing women's suffrage and naturalisation policies, and economic reform, as indicated by reductions in government subsidies and increased support for privatisation.

Chapter Five reviews the types and numbers of libraries in Kuwait, summarises the challenges that face national library and information development, and describes instruction for information literacy at various levels in Kuwait.



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<sup>2</sup>Kennedy, ref. 1, p. 12.

<sup>3</sup>Al Watan daily newspaper (in Arabic), Kuwait, 20.9.1999, p. 5.

<sup>4</sup>Ministry of Planning and Center for Research and Studies on Kuwait. *Kuwait and social development: leadership, planning, popular participation and humanitarian orientation*, 1995, p. 15.

<sup>5</sup>Lambert , Lee R. and Erin Lambert. *The other Kuwait: an American father and daughter's personal impressions*, 1992, p. 92.

<sup>6</sup>*World economic survey: current trends and policies in the world economy*, 1992.

<sup>7</sup>Kennedy, ref. 1, p. 17.

<sup>8</sup>*Ibid.*, p.44.

<sup>9</sup>*Ibid.*

<sup>10</sup>*Ibid*, p. 47.

<sup>11</sup>Dr. Abdulla Al-Onaizi of Kuwaiti University, quoted in Al-Watan daily newspaper (in Arabic), 2.10.1999, p. 4.

<sup>12</sup>Ministry of Planning. *Annual statistical abstract 1998*, 1999, p. 27.

<sup>13</sup>Al-Watan daily newspaper (in Arabic), 2.10.1999, p. 4.

<sup>14</sup>Clements, Frank A. *Kuwait*, 1996, p. xxi.

<sup>15</sup>Al-Watan daily newspaper (in Arabic), 2.10.1999, p. 4.

<sup>16</sup>Al-Watan daily newspaper (in Arabic) 2.10.1999, p. 4.

<sup>17</sup>Kennedy, ref. 1, p. 20.

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<sup>18</sup> Clements, ref. 14, p. xxi.

<sup>19</sup> Lambert, ref. 5, p. 123.

<sup>20</sup> Kuwait, Microsoft Encarta 99 Encyclopedia, 1998.

<sup>21</sup> *Ibid.*

<sup>22</sup> Report from Statistical Department (in Arabic). *Akhbar Al-Haya* (PAAET News), 1999, 14(4), 26.

<sup>23</sup> Lambert ref. 5, p. 134.

<sup>24</sup> Al-Othaimeen, Ekbal. *Towards an understanding of the cognitive information seeking behaviour of undergraduate students at Kuwait University*. Ph.D. thesis, University of Wales Aberystwyth, 1996, p. 48.

<sup>25</sup> Seery, ref. 1, p. 9.

<sup>26</sup> Arabia, Microsoft Encarta 97 Encyclopedia.

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## **Chapter Five**

### **Libraries and Instruction for Information Literacy in Kuwait**

The first library in Kuwait, “The Peoples’ Library” was established in 1923. It has since been moved to several locations and has been renamed several times to reflect its growing collection: the Central Public Library in 1936, the Central Library in 1979, and the National Library of Kuwait in 1986. The fact that Kuwait presently has more than 600 libraries serving a population of 2 million suggests a strong role in the community and a promising future in the field. This chapter reviews the types and numbers of libraries in Kuwait and summarises the challenges that face the rapidly changing field of library and information science in Kuwait. It also examines library instruction in English-medium schools, Arabic schools, and higher education, for an accurate picture of Kuwaiti students’ experience in libraries and exposure to instruction for information literacy.

#### **Libraries in Kuwait**

Libraries and information centres in Kuwait can be classified into five types according to their functions: national, academic, special, public and school libraries. The majority of libraries in Kuwait are controlled and financed by the Kuwaiti government. The National Library of Kuwait, mentioned above, endeavours to enrich cultural activities and guard the national heritage and culture of Kuwait. Its collection includes publications about Kuwait or by Kuwaiti authors. It is also depository library for government and semi-government publications.<sup>1</sup>

There are 28 academic libraries associated with the two governing bodies responsible for higher education in Kuwait: Kuwait University (KU), established in 1966, and the Public Authority for Applied Education and Training (PAAET), established in 1982; both are controlled and financed by the Ministry of Higher Education. Eleven college libraries and two special collection libraries are organised under Kuwait University’s Libraries Administration, which is a centralised administration department that controls expenditures, purchasing, technical services and the



distribution of library materials. KU libraries, which serve an annual population of approximately 15,000 students, have a collection of more than 4000 periodical titles and approximately 270,000 books; 43% are in Arabic and 57% in foreign languages, mostly English. There are two special collections; one is the United Nations Publications Library, which is a depository for publications and documents of UNESCO, FAO, WHO, ILO, IBRD, and IDA, and the other is the Kuwait and Gulf Information Centre.<sup>2</sup>

PAAET's 16 libraries are also organised under a centralised Department of Learning Resources, which provides 27,000 students of eight colleges with library services. The main difference between KU and PAAET libraries is that there are separate campuses for men and women in PAAET, resulting in approximately duplicate libraries for each college.

There are 40 special libraries and information centres sponsored by ministries and governmental departments and at least 20 non-government special libraries attached to research institutions, banks, corporations, the press, and local, regional and international associations. Al-Ansari states that the largest and best organised libraries in Kuwait are those in the Ministry of Education, the Ministry of Justice, the Kuwait National Assembly, Kuwait Institute for Scientific Research, and the Kuwait Fund for Arab Development.<sup>3</sup> Only a few special libraries, such as those sponsored by banks, the press and various corporations and associations, are independently financed and operated. The libraries of private schools, while stocked and administered according to individual school policies, are nonetheless closely monitored by the Ministry of Education.

The Libraries Department of the Ministry of Education administers both the public library system and government school libraries. Public libraries in Kuwait number 19,<sup>4</sup> the first of which was established in 1923 by a group of 18 citizens and a collection of 1500 books. It was known as *al-Maktaba al-Ahliya* (The Peoples' Library). Currently, public libraries in Kuwait have an average of 16,000 Arabic titles, 1100 foreign titles, 28 periodicals in Arabic and 9 in a foreign language.<sup>5</sup> Some

libraries have audio and/or video cassettes in the collection, but there are no electronic sources or services. Library services are minimal; even borrowing cards are not issued to users. Instead, for each item borrowed, patrons must leave a monetary deposit ranging from about 5 to 20 Kuwaiti dinars (£ 10-40), which is attached to a receipt. Upon returning the book, the borrower is reimbursed. Aman states that "the situation remains precarious at best. Public librarians in the field need guidance, a sense of direction, leadership and belonging. If properly trained, these librarians can be given more responsibilities and the concomitant authority to run their libraries according to modern standards for public libraries."<sup>6</sup> According to a study by Al-Ansari *et al*, there is a low level of public awareness about public libraries in Kuwait, and the facilities, collections and services are below standard.<sup>7</sup>

The development of modern school libraries was initiated in 1951 when the Division of School Libraries was established. In 1962, it was renamed the Libraries Department, which now supervises both public and school libraries and is responsible for acquiring, processing and distributing library materials to 19 public libraries and 520 government schools in Kuwait. Lonsdale, who surveyed Kuwait's school libraries in 1996, describes the nature of school library collections:

The collections of the primary, intermediate and secondary school libraries visited are primarily composed of books, and this is characteristic of most of the schools in Kuwait. Recently, periodical collections have been established in the secondary school libraries. These comprise largely Arabic titles, although some English language periodicals are acquired to support the teaching and professional needs of the staff. The English language journals are selected centrally and relate to Teaching English as a Foreign Language. No English language titles for pupils were in evidence in the schools visited. Some libraries have established small collections of audio visual materials, most notably audio cassettes to support the teaching of languages, eg French. Although the rare example of computer facilities within the library was noted, computer software and multimedia collections were not in evidence.<sup>8</sup>

In addition, Lonsdale reports that school library collections typically have "redundant stock (eg reference material over 30 years old, unnecessary duplication of out of date titles), and titles which had, at best, a tenuous link to the school curriculum."<sup>9</sup>



The Libraries Department published standards for Kuwait's school libraries in 1987.<sup>10</sup> Tables 5.1, 5.2 and 5.3 present recommended and minimum basic accommodation, the minimum growth rate of a collection and minimum staffing requirements for Kuwait's schools.

**Table 5.1 Kuwait Standards for School Library Accommodation**

	Type of School			
	Kindergarten	Primary	Intermediate	Secondary
Recommended accommodation	10% roll x 3.3m <sup>2</sup>	10% roll x 3.3m <sup>2</sup>	10% roll x 3.3m <sup>2</sup>	10% roll x 3.3m <sup>2</sup>
Minimum accommodation				
Main room	63m <sup>2</sup>	70m <sup>2</sup>	96m <sup>2</sup>	136m <sup>2</sup>
Processing	12m <sup>2</sup>	12m <sup>2</sup>	16m <sup>2</sup>	16m <sup>2</sup>
Audio-visual room	24m <sup>2</sup>	24m <sup>2</sup>	26m <sup>2</sup>	36m <sup>2</sup>
Storage			12m <sup>2</sup>	12m <sup>2</sup>
Study hall				42m <sup>2</sup>
TOTAL	99m <sup>2</sup>	106m <sup>2</sup>	150m <sup>2</sup>	242m <sup>2</sup>

**Table 5.2 Kuwait Standards for Minimum Growth Rate of a Collection**

Stock Provision*	Type of School			
	Kindergarten	Primary	Intermediate	Secondary
Initial Stock	200 items	700 items	1000 items	1000 items
Annual additions	200 items	700 items	1000 items	1000 items
Total after 5-year period	1000 items	3500 items	5000 items	5000 items

\*Only print material was specified in the standards. In addition, each school should have one videotape recorder, one television, and one audiotape recorder equipped with a set of headphones.

**Table 5.3 Kuwait Standards for Minimum Staffing Requirements**

Staff	Type of School			
	Kindergarten	Primary	Intermediate	Secondary
Librarian	-	-	-	1
Assistant	1	1	1	-

In addition to these quantitative standards, the Libraries Department has developed guidelines for school librarians in Kuwait and a list of tasks to be performed during the school year. The guidelines are mainly to encourage reading, provide material to teachers, provide users with library skills, and develop library programmes and school activities for the students. The tasks include technical services, purchasing periodicals, maintaining the card catalogue, student supervision, the preparation of bibliographies and indexes, general assistance, file maintenance and annual inventory. The complete guidelines are presented in Appendix 2.

Even though the importance of school libraries in the educational system in Kuwait is recognised, Zehery states that “school libraries still need to undergo fundamental changes, to develop a system capable of supporting and enhancing the educational process. To attain this goal, library objectives must be reviewed, services upgraded, and the system of library provision recognized.”<sup>11</sup>

There are two programmes for the education of librarians in Kuwait: the College of Basic Education (CBE) of PAAET offers a Bachelor of education with a major in library and information science. Graduates from this programme number approximately 100 annually. Kuwait University recently opened a Master’s programme in library and information science; it had its first graduates in 1999. In addition, several students study abroad annually in pursuit of higher degrees in library studies. The graduates of these programmes usually find employment in the government-operated libraries.

Library automation, networking and co-operation are still in their infancy in Kuwait. Very few libraries have automated information systems, the exceptions being primarily the special libraries, Kuwait University libraries and a few private school libraries. A network exists between the Arab Documentation Centre for Medical



Publications, the Ministry of Health and the university medical library. Kuwait University, PAAET, and the Kuwait Institute for Scientific Research have their library catalogues accessible via the Internet. There is informal co-operation between some libraries within Kuwait and also with libraries in the Gulf area.

Information provision in Kuwait, despite the number of libraries and the availability of technology and supporting systems, still faces difficulties. Al-humood enumerates the main obstacles facing libraries in Kuwait: 1) the national library does not provide a leading role or maintain a central collection of the nation's literature, 2) the automation of libraries is underdeveloped due to the difficulties of Arabic script and the lack of co-operation between cataloguers and automation specialists, 3) cataloguing, classification and subject heading schemes are not unified, 4) a lack of clear acquisition policies for collection development, and 5) inadequate continuing education and training for library staff.<sup>12</sup>

Al-Ansari noted several problems related to human resources in the library profession in Kuwait: scarcity of information professionals, lack of training programmes that are suitable to actual library needs, poor professional status and low salaries of those in the library and information field, and lack of institutional interest and support for human resource development. The most serious obstacle in this area, however, seems to be the general absence of human resource development policies, plans and strategies at most institutions.<sup>13</sup> Al-Ansari further reports that with the exception of non-government special libraries, the majority of library and information staff in Kuwait is comprised of paraprofessionals and clerks, with academic qualifications below international standards.<sup>14</sup> Lonsdale reported that school librarians in Kuwait do not have the academic standing of the teaching staff and are paid on a lower scale, thereby demeaning the professional integrity of the librarians.<sup>15</sup>

Unlike developed countries in the West whose information industry is highly developed, Kuwait is not a "book culture." Although standards of literacy are relatively high, people do not generally rely on books to meet their information

needs. The publication in Kuwait of material in Arabic, especially that of scientific nature, is rare. Specialised Arabic magazines or scientific journals are few in number, although leisure magazines and newspapers are available extensively.

Alqudsi-Ghabra's description of Arab countries applies to Kuwait:

Lack of an organized book trade creates a state of dependency on materials obtained from the developed nations. In addition, only a small sector of the population is highly educated, which hinders the growth of publishing industry that could be of interest to more than just an elite group.<sup>16</sup>

Adding to the problem is the fact that there is no national information policy in Kuwait and that most of the local publications do not have an ISBN (International Standard Book Number) or ISSN (International Standard Serial Number). There is no annual listing of publications, and government publications are difficult to monitor for acquisition purposes. The few periodical indices are rarely complete or published consistently, making them unreliable research tools at best.

The media culture in Kuwait is thriving due to the availability of satellite dishes and the Internet. Local television provides three Arabic and one English channel to viewers, and most citizens access foreign transmissions via satellite so that television programmes from all over the world can be received, including the BBC, CNN, TNT, Star TV, and so forth. The Internet, which was introduced in Kuwait in 1992, has also become popular in the workplace, in private homes, and in commercial "Internet cafés" throughout the country. The information environment from the media provides a strong support for the traditional oral culture of Kuwait.

The diwaniyah, or parlour, is an important part of Kuwait's information flow. It traditionally refers to the reception area of a tent or house where a man received his male guests and sat apart from the family. Today, visiting or hosting a diwaniyah is still considered an indispensable feature of a Kuwaiti man's social life. At a formal level, the diwaniyah is the medium of regular public forums where "topics of interest are discussed, associates introduced, alliances formed, and similar networking activities undertaken."<sup>17</sup> Formal diwaniyahs are hosted by well-known local persons and heads of extended families on a regular basis, often weekly. Guest speakers are sometimes invited, and the press is often present to report significant



discussions. Even election campaigns take place in the diwaniyah. The diwaniyah is an important social institution that links the individual and the government, since the individual can establish personal connections with key officials and the government can measure public opinion. As Kennedy states, the formal diwaniyahs “are the roots of Kuwait’s consensual political system.”<sup>18</sup> He also reports that although women traditionally do not attend diwaniyahs, a few well-known female personages from leading families have been holding regular diwaniyahs since the liberation from Iraq in 1991, which are attended by both men and women.<sup>19</sup>

**Information Skills Instruction in English-Medium Schools**

There are 48 English-medium schools in Kuwait. Their base curricula are according to the breakdown presented in Table 5.4 below.

**Table 5.4 Curricula Types of English-medium Schools in Kuwait**

Curricula type	Number
English	13
American	10
Indian	13
Pakistani	7
Philippine	2
Armenian	1
American/English combination	1
Unknown	1
TOTAL	48

A complete listing of English-medium schools in Kuwait is presented in Appendix 3.

In October and November, 1999, as part of this research, a questionnaire was sent to the English-medium schools in Kuwait in order to collect data about the library and information skills instruction that may be offered in these schools (see Appendix 4).

Of the 48 schools contacted, only 11 replied, or 23%. The respondents represented five English schools, four American schools, one Indian school and the Armenian school. Kuwaiti students represented 50% of the student population in English schools and 73% of the population in American schools. The responding Armenian and Indian schools had no Kuwaiti students. Of the 11 respondents, ten reported having library, information and/or research skills instruction at their schools.

For the most part, the English schools incorporate library, information and research skills into the curriculum as part of the English National Curriculum. Instruction is incorporated into the curriculum and sometimes taught in consultation with the librarian. Students may occasionally receive a separate lesson taught by the librarian on specific information skills. Generally, the assessment of information skills is not graded but may be incorporated into other subject areas. All responding schools reported consulting with the librarian(s) for instruction, and most reported using locally produced material such as worksheets to support oral information skills instruction; one school uses textbooks and a videotape to support instruction.

Of the responding American schools, information skills instruction is more varied. Some teach library, information and/or research skills at the primary level and some teach it in the intermediate and secondary levels. None of the responding schools reported having instruction at all levels. Two schools reported having a separate, required course for teaching library or information skills, and the other two schools incorporate individual lessons as required by subject teachers. All responding schools reported consulting with the librarian(s) for instruction. One school indicated that grades are given for library instruction, one school incorporates assessment into the language arts grade, and two schools do not give grades for information skills. Primarily locally produced material is utilised to support oral instruction, but one school reported using a combination of textbook, videotape, workbook, locally produced material and oral instruction. Only one responding school reported teaching information skills as a generic problem-solving process taught by the teacher and the librarian as a team.

The responding Indian school reported that library, information and research skills are taught at all levels, but gave no details of the curriculum. The Armenian school



offers instruction in information and research skills only as occasional lectures as required by the teacher; skills are not graded.

### **Information Skills Instruction in Arabic Schools**

There are three types of Arabic schools in Kuwait: private, traditional public, and "credit unit" public schools. The private and traditional public schools follow the curricula planned and enforced by the Ministry of Education and all students receive the same classes at each respective grade level. The credit unit schools, in operation since 1978, offer the students limited choice in the course content of their secondary education. Approximately 60% of Kuwait's 70,000 public secondary school students attend credit unit schools.

Some private Arabic and traditional public Arabic schools have a library period during which students visit their school library accompanied by their Arabic language or religion teacher. The period is not for searching or gathering materials, but rather for recreational reading. In general, integration of the library in the instructional process is very limited. A few schools may offer library skills instruction, but only as an optional extracurricular activity since it is not formally included in the curricula. Provision depends on the individual school as well as the willingness of the librarian and the appropriateness of the collection. No grades are given for such a course, and few students take advantage of it.

Most Kuwaiti students who have had library or information skills instruction are graduates of credit unit schools, which have required library skills instruction since the 1978/79 academic year. The objectives of the library skills programme are to spread awareness about libraries among secondary school students, to promote lifelong learning, teach information skills related to the library, its catalogues and sources, to support the research requirements of various courses within the general curriculum, and to prepare students for post-secondary and subsequent education.<sup>20</sup>

Teachers of library skills courses must have a minimum of a bachelor degree in

librarianship. Graduates of PAAET's College of Education with a major in library and information science are accepted for teaching posts in credit unit schools.

Students in credit unit schools are required to take two courses, each representing approximately 30 hours of instruction, or ½ credit, to be taken over the course of a semester. The student guidebook describes the goals of the courses as:

Course # 10: (prerequisite for course # 20)

- Definition of the library
- Educational role of the library
- Importance of the library in personal life
- Regulations of borrowing
- Means of reaching books and materials in the library
- Information sources: definitions, types and formats.

Course # 20 Elements and dimensions of research

- Gathering information
- Methods of research
- Summarising and writing research
- Footnotes and bibliographies
- Applications for research papers
- Retrieving information
- Field visits to libraries out of school

A single textbook is required for both courses. Course #10 covers three chapters. The first discusses the history of books and libraries, including the evolution of writing, the development of the book through time, the history of libraries and types of libraries. Chapter Two reviews technical services including the parts of a book, book arrangement in the library, and card catalogues. Classification systems are mentioned but details of the Dewey Decimal Classification (DDC) Scheme are presented as well as some Arabic modifications to the DDC for special treatment of Arabic and Islamic sources. Chapter Three reviews information sources, including their definitions and types, and evaluation methods, with emphasis on reference sources.



Chapter Four of the student textbook is taught in course #20 in the second semester. It covers the definition and importance of research, the history of scientific research, methodology, tools and formats. Then the process of research is described in five steps: identify the topic of research, register and identify the sources, collect and organise the information, write the research, and prepare the supplements to the research.

In addition to recall tests, assignments in course #10 include reference questions and assignments on the topic of classification and catalogue cards. In course #20, students are required to collect information on a scientist, to prepare a book report, and to prepare a research paper on a topic of his choice according to the steps outlined in the textbook. Generally, students are required to have at least three books on the subject of their research, to collect information on note cards and to note bibliographic information on one card for each source. A draft and final copy are prepared as well as a title page, dedication page, acknowledgements, a table of contents and a bibliography.

With the exception of the credit-unit secondary schools, the school library media programme and the school librarian in public schools are not valued as an essential part of the teaching process. Ali studied the perceptions of the school library media specialist's role as perceived by principals, teachers and school librarians in public schools in Kuwait. He concluded that teachers and principals "see library media specialists as keeper of books who has limited role in the educational process" and that they do not recognise the librarian's abilities as teachers and managers.<sup>21</sup>

Furthermore, the policy that school librarians are held personally accountable and financially responsible for lost or stolen items from their library<sup>22</sup> does not provide incentive for school librarians to encourage the use of the library by students and teachers.

## Post-Secondary Information Skills Instruction

Library and information skills instruction at the post-secondary level is minimal in Kuwait. PAAET students are offered the course *Libraries and Research* as an elective for all majors. The staff of the Department of Library and Information Science within the College of Basic Education (CBE) teaches it. Students within the CBE are offered a different elective course entitled *Libraries and their Use*.

At Kuwait University, general library skills instruction is offered within English language courses offered by the English Language Unit of the College of Education. For example, English 162 in the College of Science is offered as an elective for science majors for 3 credits, or five hours per week for one semester. The objectives of the course are to prepare students to conduct research in the library, to offer students advanced writing practice in English and to provide skills to read complex scientific texts. English language, rather than library skills, however, provides the emphasis. Similar courses are offered in the College of Shari'a, the College of Law, and the College of Arts.<sup>23</sup> In addition to these courses, the faculties of computer science and library and information science at KU have recently began offer Computing and Information Skills for Biological Sciences as a three-credit course for biological science majors.

Al-Othaimeen, who worked as a librarian both in Kuwait University and Kuwait Institute for Scientific Research, studied the information-seeking habits of Kuwait University students after observing their frustration when pursuing their everyday information needs. She examined whether the existing information systems within Kuwait University meet students' information needs.<sup>24</sup> The following points were among the conclusions of her study:<sup>25</sup>

1. Kuwaiti students experience difficulties in communicating with the authorities of Kuwait University, particularly lecturers, indicating that they are viewed by students in a negative rather than positive light with regard to the learning process.
2. Kuwaiti students were reluctant to ask questions, another indication of poor student/teacher relationships, and perhaps of low self-esteem.



3. Kuwaiti students heavily use informal information sources within the campus and a variety of sources outside, such as family and relatives. Al-Othaimeen remarks that "Kuwaiti students lack faith in the formal information system represented by lecturers, libraries, or any administrative sources within the university. Therefore, students resort to the more informal system; that is friends, relatives or self and also the use of Wastah (facilitator)."<sup>26</sup>
4. Libraries are not an important part of the information-seeking behaviour of Kuwaiti students, and are not considered as a source of information by them.

Al-Othaimeen feels that "very little attention has been paid to the majority of the student population; the sophisticated information systems and services are planned and developed to cater to the minority intellectual elite. However, ... the majority of students are cut off from the information flow."<sup>27</sup> She noted that university students lack the information skills defined by Irving as "a range of subordinate or prerequisite skills, those associated with reading, writing, searching, retrieving, organising, processing, thinking, analysing and presenting. Above all, it includes the skill of formulating questions and hypotheses, learning what there is to know about, and what question to ask in order to find out."<sup>28</sup> In her final recommendations, Al-Othaimeen suggested services for bibliographic and library instruction at the university since "students do not use libraries to fulfil their information needs, therefore they do not make the best use of the information services that are available to them and may even be unaware of their existence."<sup>29</sup> She recommends orientation exercises, training in the use of the library and formal courses on information retrieval.

With reference to library skills proficiency among KU students, Gloria Mohammad undertook a study of library skills among incoming students. She found that students lack library skills in all areas, are "severely deficient" in their knowledge of library terminology and are uncomfortable using computers. She discovered a highly significant relationship between secondary school type and library skills. She states that "the results reveal that students from private schools possess better library skills than those from the public system."<sup>30</sup>

## Conclusion

Although the number and variety of libraries in Kuwait suggests a great potential for an active and influential library profession, several factors contribute to its limited role in Kuwaiti society. Among these are the limitations of traditional curricula and teaching methods, poor perceptions and attitudes toward school libraries on the part of educational authorities, lack of planning for information provision and human resource training at all levels, low levels of autonomy in public and school libraries, and general unawareness of the library's potential among decision makers. The vicious cycle that characterises library and information provision in developing countries certainly applies in Kuwait.

Library or information skills instruction in Kuwait exists on several levels, primarily:

- In traditional Arabic schools as an extracurricular activity
- In credit unit Arabic schools as a required year-long course
- In English-medium schools, usually integrated throughout the curriculum over several grade levels
- In post-secondary education, either as a single elective course (PAAET) or integrated into English language courses (KU)

Hence, students of Arabic credit unit and English-medium schools would have some instruction in library or information skills as well as access to a school library at some point during their school years. However, it is entirely possible that students of Arabic schools could proceed through university education without ever having received instruction for information literacy or without having used a library.

Chapter Six summarises the components of culturally relevant programme of instruction for information literacy for Kuwaiti students and describes suitable foundations of a curriculum for such a programme. It presents in detail lesson plans, supporting material and assessment tools that could be used for such a programme, the same that were used to test the hypothesis that instruction for information literacy that is culturally relevant elicits a higher learning response in Kuwaiti youth as opposed to instruction with identical general aims that is not culturally relevant.



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- <sup>4</sup> Al-Ansari, Husain, et.al. *Daleel al-Maktabat wa Marakaz al-Ma'alumat be-Dawlat al-Kuwait*. (Directory of libraries and information centres in the state of Kuwait, in Arabic), 1997, p. 112.
- <sup>5</sup> *Ibid.*, pp. 113-131
- <sup>6</sup> Aman, Mohammed M. *Report on mission to Kuwait's Ministry of Education*, 1991, p. 17.
- <sup>7</sup> Al-Ansari, Hussain, Rifat Abuzaid, Taghreed Al-Qudsi, Ahmed Al-Abdulla, and Ayad Al-Sharakh. *Tatweer Waqa' al-Maktabat al-Aama fil-Kuwait*. (Developing the state of public libraries in Kuwait, in Arabic), 1999.
- <sup>8</sup> Lonsdale, Ray. *Report on the development of school library resource centres in Kuwait*, 1996, p. 14.
- <sup>9</sup> *Ibid.*, p. 19.
- <sup>10</sup> Central Department for School Libraries. *Ala-eeha ashamella lil-maktabat al-madrasayah* (Standards for school Libraries, in Arabic), 1987. In: Abdel-Motey, Yaser. *Education for school library media specialists in the state of Kuwait: a competency-based approach*. Ph.D. thesis, Loughborough University of Technology, 1989, pp. 121-22.
- <sup>11</sup> Zehery, Mohammed H. School libraries in Kuwait before and after the Gulf War. In: Michael Wise, ed., *Information and Libraries in the Arab World*, 1994, p. 137.
- <sup>12</sup> Al-Humood, Nahla. *A plan for the establishment of a national bibliographic network for Kuwait in the light of international and local standards*. Ph.D. thesis, Loughborough University, 1998, pp. 238-39.
- <sup>13</sup> Al-Ansari, ref. 4, pp. 103-104.
- <sup>14</sup> *Ibid.*, p. 153.

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<sup>15</sup> Lonsdale, ref. 8, pp. 21-22.

<sup>16</sup> Alqudsi-Ghabra, T. Librarianship in the Arab World. *International Library Review*, 1988, 20, p. 236.

<sup>17</sup> Kennedy, Paul D. *Kuwait pocket guide 1998*, 13<sup>th</sup> ed., 1998 p. 39.

<sup>18</sup> *Ibid.*

<sup>19</sup> *Ibid.*

<sup>20</sup> Ministry of Education, Libraries Department. *Libraries and methods of research course in secondary credit unit schools*, (in Arabic), 1985.

<sup>21</sup> Ali, Abdulrazzaq Hussain. *A comparative study of the perceptions of the school library media specialist's role as perceived by principals, teachers, and school library media specialists in public schools in the state of Kuwait*. Ph.D. thesis, Florida State University, 1997, pp. 115-116.

<sup>22</sup> Aman, ref. 6, p. 12.

<sup>23</sup> Kuwait University. *General undergraduate catalog 1997-1999*, pp. 84-96.

<sup>24</sup> Al-Othaimeen, Ekbil. *Towards an understanding of the cognitive information seeking behaviour of undergraduate students at Kuwait University*. Ph.D. thesis, University of Wales Aberystwyth, 1996, p. 264.

<sup>25</sup> *Ibid.*, pp. 242-261.

<sup>26</sup> *Ibid.*, pp. 254-255. "Wastah" is the word used in Kuwait for an influential connection. It may be sought for the most trivial needs to the most complex problems. The saying, "It's not what you know, but who you know" is conveyed with the word "wastah."

<sup>27</sup> *Ibid.*, p. 261.

<sup>28</sup> Irving, Ann. *Study and Information Skills Across the Curriculum*. In: Al-Othaimeen, ref. 24., p. 265.

<sup>29</sup> Al-Othameen, ref. 24., p. 270.

<sup>30</sup> Mohammad, Gloria. *An assessment of the library skills of new students and its relationship with some academic factors: the case of Kuwait University College of Science*, 1999, p. 26-27.



## **Chapter Six**

### **Culturally Relevant Curriculum Development**

#### **Introduction**

Children in English-medium schools in Kuwait are taught curricula that are most often imported from the country of influence, the most common being English, Indian and American. Kuwaiti students attending these schools receive instruction that is often not relevant to their cultural identity. Information literacy programmes in schools, still in their infancy in Kuwait, can benefit from educational practice that indicates that culturally relevant education results in higher achievement among culturally different students.<sup>1</sup>

The scope of this study is based on the literature review of culturally relevant education, Kuwaiti culture, and instruction for information literacy. The literature review provided a definition of culturally relevant instruction for information literacy for Kuwaiti students, which is the basis of the field research. According to the literature review, it should have the following general characteristics:

1. It exhibits the general characteristics of culturally relevant education
2. It reflects the culture of Kuwait on its various levels
3. It presents a general process of information problem solving and teaches specific library and research skills within the information problem solving process framework
4. It is planned and/or taught in collaboration with teachers and integrated into the curriculum.

This chapter describes these four components of a culturally relevant instructional programme for information literacy for Kuwaiti students, and is followed by a description of the foundations of the curriculum developed for the field research, detailed lesson plans and supporting material used to test the hypothesis put forth in Chapter One, and the assessment tools used to measure student achievement and attitudes.

## **Components of a Culturally Relevant Information**

### **Literacy Programme for Kuwaiti Students**

1. Culturally relevant education. Culturally relevant education begins with the culture and builds education around it. It uses the students' culture to help them create meaning. Ultimately, it serves to empower students intellectually, socially, emotionally, and politically to the point where they are able to examine critically educational content and process and question its role in creating a democratic society.

Since the social and historical contexts of a society determine, to a large extent, the students' experiences, they should be referred to in the culturally relevant classroom so that the teacher can draw on issues and ideas that students themselves find meaningful. Students are taught to become aware of broad socio-political issues and may recognise gaps between ideal situations and their own reality. By being permitted to explore alternatives and voice opinions that may differ from traditional perspectives, students can be guided to practical, student-conceived resolutions of problems within their societies.

Culturally relevant education demands respect for the cultural values, social organisation and communication patterns practised by members of that culture. Bilingualism and biculturalism are fostered in the classroom, and the material used in the classroom enhances the students' self-concept. The teacher expresses respect and solidarity with the people of the culture and helps students overcome societal challenges in a non-patronising way. Students are encouraged to maintain their cultural identity as well as achieve academic excellence so that they are empowered with the knowledge, skills and attitudes to operate successfully in their society. The culturally relevant teacher is warm, affectionate, academically challenging and strict. S/he develops good rapport not only with the students but also with their parents, who may be involved in classroom instruction and activities.

2. Kuwaiti culture. Kuwait's culture is a reflection of its unique national history, its regional identity with its desert environment and oil-based economy, its shared language, culture and history with Arabs, its strong bases in the Islamic religion, and



its struggle as a developing country. When examined closely, these cultural characteristics offer both challenges and opportunities for culturally relevant education. Some examples of culturally relevant subject matter are presented in Table 6.1.

**Table 6.1 Examples of Culturally Relevant Subjects and Instructional Opportunities for Kuwaiti Students**

Identity	Subjects	Instructional Opportunities
Kuwait	Gulf War Border issue Prisoners of war Women's suffrage Kuwait's early history Taxation	Human rights issues Perspective beyond nationalism Pearling Kuwait-British relations
Gulf country	Indigenisation Oil economy Desert environment Member of GCC	Employment trends National economies Environmental issues Co-operative alliances Value of vocational labour Environmental and conservation strategies
Arab country	Arabic language Arabic calligraphy Arab scientists and philosophers	Influential persons from history Contemporary personalities Regional art forms
Islamic country	Interpretation and application of Quran and Sunnah Islamic history	Application of ancient texts to current situations Evaluation of sources for bias and error Comparative religion
Developing country	Growth vs. development Information flow Westernisation	Information as power Cultural views Measuring human input/activities

Teachers who adopt culturally relevant education may refer to subjects such as these in the classroom or use them as bases for entire lessons or units. By drawing on current cultural issues, teachers can help students understand the world around them and lead them to new knowledge and a sense of personal involvement and responsibility. The potential empowerment that culturally relevant education offers to students is crucial for education in developing countries, where entire countries are often under the strong influence of developed, information-rich, culturally-imperialistic countries. Culturally relevant education can lead students to better self-awareness, experience in analysing problems in their societies, and the self-confidence to offer viable solutions to those problems.

3. Information problem solving process and supporting components. As determined by the literature review, the current trend in information skills instruction is to teach students the information problem solving process in generalisable steps. This general process of information problem solving offers opportunities to teach specific information and research skills within that framework. In a culturally relevant information skills programme, the problem-solving process remains the same, but the information and research skills taught include those that reflect the culture. For example, in Kuwait the *diwaniyah* is a common source of information and a powerful medium of ideas and activities. When discussing information sources with students, the *diwaniyah* must be included among the traditional sources such as encyclopaedias, periodicals and the Internet. Especially on issues that are highly relevant to Kuwaiti society, culturally relevant research methods are important because there may be little information available in the sources commonly used in print-based, information-rich societies. To exclude information sources that are relevant to the culture would seriously limit the students' information-gathering power, thereby reducing their ability to understand, analyse and solve culturally relevant information problems.

4. Integration of information literacy instruction into school curricula.

Information literacy programmes that are integrated into the school curriculum are more relevant and produce better results than those programmes that are isolated from the curriculum, as indicated by the studies of Nolan<sup>2</sup> and Oliver & Oliver.<sup>3</sup> An



ideal programme for information literacy, therefore, should be planned and taught in collaboration with teachers and should involve the support of the principal and community members. Well-stocked and staffed libraries and resource centres are crucial to the implementation of such a programme.

To summarise, a programme of instruction for information literacy that is culturally relevant for Kuwaiti students has the following characteristics:

- Centered around the culture
- Empowers students to offer self-conceived solutions to societal problems
- Students find issues meaningful to them
- Students become aware of broad socio-political issues
- Students can voice non-traditional opinions and offer self-conceived solutions
- Cultural values are respected
- Social organisation and communication patterns are respected
- Teacher expresses respect and solidarity with people of the culture
- Biculturalism and the maintenance of cultural identity is encouraged
- Teacher is warm, affectionate, strict, academically challenging
- Teacher involves parents in education
- Information problems relate to culture and society
- Individual information and research skills reflect habits and resources in the culture
- Information problem solving is taught as a generalisable process
- Information skills instruction is integrated into the general curriculum
- Support of principals, teachers and the community is sought in information skills instruction
- Well-stocked and staffed libraries or resource centres are available for student use.

## **Foundations of the Curriculum**

In preparation for this study on culturally relevant information literacy instruction for Kuwaiti students, the researcher undertook library skills instruction for Kuwaiti students in the 1998/1999 scholastic year. Approximately 150 sixth, seventh and eighth grade male and female students (10-14 year olds) received one 40-minute lesson per week during the year. During the same year the researcher had teaching experience with younger Kuwaiti students in grades one through five, although it was not as extensive as with the older students, nor as documented. The teaching experience provided the researcher with insight into the experience, abilities and attitudes not only of Kuwaiti students, but also of their parents, who often expressed concern about helping their children study a topic about which they had very little knowledge.

The researcher discovered that many of the students lacked basic knowledge of library and information concepts, skills and processes. This being so, the first quarter of the year was reserved for the review of basic information such as parts of the book, types of information and library arrangement and facilities. During the following two quarters students learned how to use the library catalogue and locate information in various sources, and during the last quarter students used their newly-acquired skills to write a research paper.

In general, it was found that students initially had a very poor attitude toward library skills instruction and were not motivated to complete the assignments required, resulting in very poor achievement. However, as their knowledge and skill levels increased, their attitudes toward instruction improved as did their achievement grades. Nevertheless, many students' attitudes did not improve, nor did they complete the assignments required for the course, resulting in a fail rate of approximately 33% for the year. It was clear to the researcher that motivation was a key factor in student success.

The researcher found it challenging to teach culturally different students. It was an experience that reinforced the importance of identifying the components of culturally



relevant education and a suitable information literacy programme that would address the students' personal experience and interests.

Based on the researcher's experience with Kuwaiti students and on the literature review presented in chapters two through five, an information literacy syllabus was developed to test the hypothesis put forth in Chapter One. The course of instruction was designed to span six weeks for eighth grade students and eight weeks for fourth grade students. The main foundations of the syllabus are the 1998 Information Literacy Standards for Student Learning<sup>4</sup> and the Big Six<sup>TM</sup> information problem solving strategy.<sup>5</sup> The information literacy standards developed by the AASL and AECT are comprised of three standards of information literacy, three standards of independent learning and three standards of social responsibility, the latter two having information literacy as a component. Although the document was written primarily for North American audiences, Hannesdottir believes "its value and usefulness is universal. The bulk of the document can be used in any setting, where vision and philosophy, information literacy standards and other valuable information can be adapted and adjusted to different educational settings and learning environments."<sup>6</sup> With this applicability in mind, both instruction and the assessment tools are based on the three standards of information literacy and the indicators of either basic or proficient levels of proficiency, as described in the document *Information Literacy Standards for Student Learning*. The three standards, thirteen indicators and corresponding levels of proficiency used for the test instrument are presented below.

Standard 1: the student who is information literate accesses information efficiently and effectively.

Indicator 1: Recognises the need for information. (Proficient level: When faced with an information problem or question, determines whether additional information (beyond one's own knowledge) is needed to resolve it.)

Indicator 2: Recognises that accurate and comprehensive information is the basis for intelligent decision making. (Basic level: Selects examples of accurate and inaccurate information and of complete and incomplete information for decision making.)

Indicator 3: Formulates questions based on information needs. (Basic level: States at least one broad question that will help in finding needed information.)

Indicator 4: Identifies a variety of potential sources of information. (Basic level: Lists several sources of information and explains the kind of information found in each.)

Indicator 5: Develops and uses successful strategies for locating information (Basic level: Lists some ideas for how to identify and find needed information.)

Standard 2. The student who is information literate evaluates information critically and competently.

Indicator 1: Determines accuracy, relevance and comprehensiveness. (Basic level: Defines or gives examples of the terms “accuracy,” “relevance,” and “comprehensiveness.”)

Indicator 2: Distinguishes among fact, point of view and opinion. (Basic level: Recognises fact, opinion and point of view in various information sources and products.)

Indicator 3: Identifies inaccurate and misleading information. (Basic level: Recognises inaccurate or misleading information in information sources and products.)

Indicator 4: Selects information appropriate to the problem or question at hand. (Basic level: Recognises information that is applicable to a specific information problem or question.)



Standard 3. The student who is information literate uses information accurately and creatively.

Indicator 1: Organises information for practical application. (Basic level: Describes several ways to organise information – for example, chronologically, topically and hierarchically.)

Indicator 2: Integrates new information into one's own knowledge. (Basic level: Recognises and understands new information and ideas.)

Indicator 3: Applies information in critical thinking and problem solving. (Basic level: Identifies information that meets a particular information need.)

Indicator 4: Produces and communicates information and ideas in appropriate formats. (Basic level: Names a variety of different formats for presenting different kinds of information.)

A second foundation of the syllabi for fourth and eighth grade information literacy instruction courses is the Big Six™ information problem solving strategy. The Big Six is perhaps the most widely-known and -used approach to teaching information and technology skills in the world. Used in thousands of K-12 schools, higher education institutions, and corporate and adult training programmes, the Big Six information problem-solving process is applicable whenever people need and use information. Listed below are the six basic steps of the Big Six model and components of each step commonly referred to as “the little twelve.”<sup>7</sup>

## 1. Task Definition

1.1 Define the information problem.

1.2 Identify information needed in order to complete the task (to solve the information problem.

## 2. Information Seeking Strategies

2.1 Determine the range of possible sources (brainstorm)

2.2 Evaluate the different possible sources to determine priorities (select the best sources)

## 3. Location and Access

3.1 Locate sources (intellectually and physically)

3.2 Find information within sources

## 4. Use of Information

4.1 Engage (e.g. read, hear, view, touch) the information in a source

4.2 Extract relevant information from a source

## 5. Synthesis

5.1 Organise information from multiple sources

5.2 Present the information

## 6. Evaluation

6.1 Judge the product (effectiveness)

6.2 Judge the information problem-solving process (efficiency)

The combination of the information literacy standards and the Big Six approach to problem solving provided a broad foundation for the syllabi used in the field study of comparative instruction for Kuwaiti students.

## **Lesson Plans**

Two sets of lesson plans for each grade level were constructed based on indicators of information literacy and the Big Six information problem solving strategy. One set reflects Western orientation by featuring examples of Western origin; the other set reflects Kuwaiti culture by incorporating examples that are more culturally relevant to the Kuwaiti student. However, to eliminate variables that could be defined as “just good teaching,”<sup>8</sup> only the following characteristics of culturally relevant education were considered for inclusion in the field research:



- Examples used are centered on the culture
- Cultural values are respected
- Information problems relate to culture and society
- Individual information and research skills reflect resources in the culture.

Instruction that exhibits characteristics of culturally relevant education but does not have direct reference to the culture was treated equally in both groups; these include, for example, the teacher being warm, affectionate, strict and academically challenging. In addition, parental involvement in classroom instruction was deliberately avoided to minimise outside influence on the students' understanding of the material and achievement during the course, and thereby increase the internal validity of the comparative instruction. Furthermore, the inclusion of bilingual material or that which reflects one of the goals of Islamically-relevant education, i.e., to develop the spirituality of the student, was not utilised since an equivalent could not realistically be offered to the students receiving Western-oriented instruction. Therefore, although culturally relevant instruction is comprised of many factors, for the purpose of this study only those that could be carefully controlled were included in the lesson plans.

To ensure some amount of controlled structure on classroom instruction, numerous transparencies were used as visual aids. This enabled the researcher to guarantee, as much as possible, equivalent instruction to both groups, the only difference being the cultural referents used as examples during instruction and presented with transparencies.

The following pages present the lesson plans for grade four and eight, respectively, each one being followed by the examples presented on transparencies for student viewing.

Grade 4: Lesson 1/7	<b>Introduction: Information Problems</b>	
Target indicators	1.1: Recognises the need for information. 1.2: Recognises that accurate and comprehensive information is the basis for intelligent decision making.	
General objectives	Pre-test Review Super Three Discuss information problems	
Materials	Pre-test Super Three transparency Three information problem transparencies	
Part 1 25 mins	Introduce teacher. Administer pretest, 25 minutes.	
Part 2 10 mins	Introduce information problems. <i>The test you just took could be called an "information problem" because it is a problem that required information in order to be solved. In addition to tests and other kinds of schoolwork, we face information problems every day. Who can think of an example?</i> After student feedback, view information problem transparencies.	
Western-oriented: 1. Preparing for a trip to London 2. Finding a recipe for cheesecake 3. Writing a report about the Statue of Liberty		Kuwaiti-oriented: 1. Friend preparing for a trip to Kuwait 2. Finding a recipe for jereesh 3. Writing a report about the Kaaba
Stress that accurate and comprehensive information is the basis for intelligent decision making. Ask students why that is true. Discuss each transparency again in light of information and intelligent decisions.		
Part 3 5 mins	Introduce Super 3. <i>This quarter we are going to learn about solving information problems. One way to do that is to use the Super3.</i> Display Super 3 transparency and refer to information problems above while discussing it.	
With Super 3 transparency displayed, ask if students feel such a strategy would help in solving information problems. Why or why not?		
Part 4	Conclusion: <i>Next week we will learn about another information problem solving starategy and we'll discuss how to use it to solve some information problems...</i>	

**Figure 6.1 Grade 4 Lesson Plan 1**



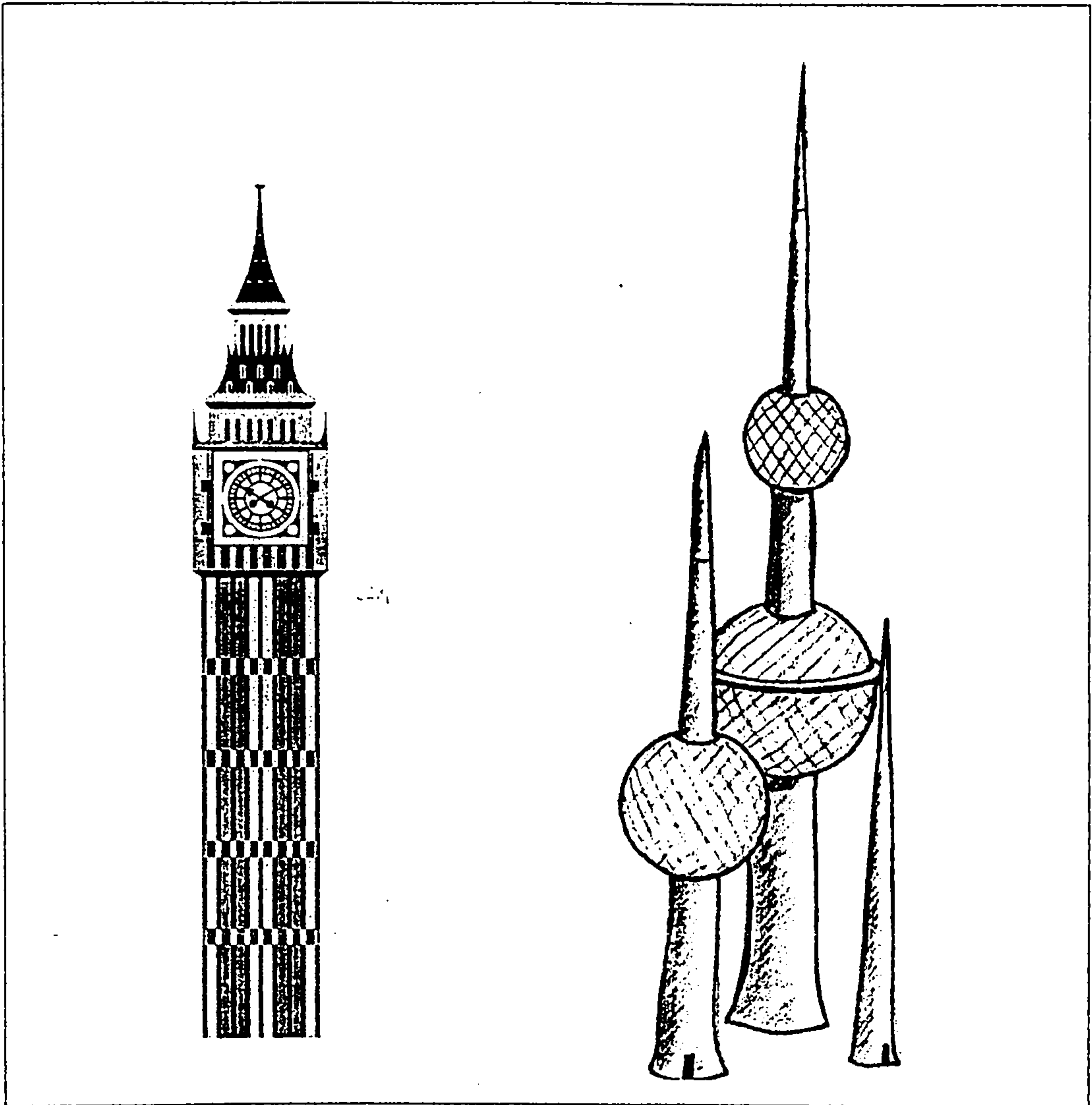


Figure 6.2 Grade 4 Information Problem 1

### Lesson 1

The images above were presented during the discussion of types of information problems. Students were asked to imagine that they should either prepare for a trip to London or help a friend in London prepare for a trip to Kuwait. The image of Big Ben was presented to students receiving Western-oriented instruction and the image of Kuwait towers was presented to students receiving Kuwaiti-oriented instruction. Students in each class discussed what information is needed to solve the information problem presented to them.



**Figure 6.3     Grade 4 Information Problem 2**

### **Lesson 1**

The images above were presented during the discussion of types of information problems and represented the final information problem discussed in the first class session. Students were asked to imagine that they needed a recipe. The image of cheesecake was presented to the students in the Western-oriented group and the image of jereesh (a savoury porridge with bits of meat or poultry, popular among Kuwaitis) was presented to students in the Kuwaiti-oriented class. Students in each class discussed what information is needed to solve the information problem presented to them.





**Figure 6.4 Grade 4 Information Problem 3**

### **Lesson 1**

The images above were presented during the discussion of types of information problems. Students were asked to imagine that they were required to write a report about a famous landmark. Students in the Western-oriented group viewed the image of the Statue of Liberty and students in the Kuwaiti-oriented group viewed the image of the Kaaba, which is located in Saudi Arabia. Students in each class discussed what information is needed to solve the information problem presented to them.

## Information Problem Solving

# The Super Three

### 1. Beginning

What am I supposed to do?

What will it look like if I do a really good job?

What do I need to find out to do the job?

### 2. Middle

I do the job I am supposed to do.

### 3. End

Is the job done?

Did I do what I was supposed to do?

Do I feel OK about this?

Should I do something else before I turn it in?

Figure 6.5 Grade 4 Super Three

## Lesson 1

The Super Three is an early childhood version of the Big Six information problem solving strategy.<sup>9</sup> The transparency above was used to introduce the concept of an information problem solving strategy in simple terms. The steps were discussed in relation to the requirements of the information problems introduced in class. The Super Three provided a frame of reference for the more complex Big Six strategy, which was introduced in the second class session.



Grade 4 Lesson 2/7	<b>The Big 6 and Task Definition</b>	
Target indicators	1.3: Formulates questions based on information needs.	
General objectives	Review information problems and role of Big 6 in solving them Discuss task definition for project	
Materials	Whiteboard marker 3 Information problem transparencies Super 3 transparency, Big 6 transparencies Homework: Task definition	
Part 1 5 minutes	Review types of information problems, refreshing their memory with transparencies. Ask why information is the basis for intelligent decision making. Review Super 3 summary.	
Part 2 10 minutes	Big Six Overview. <i>Super 3 is helpful, but the Big Six is a more detailed strategy...</i> Display Big 6 transparencies one at a time and ask students to predict next step. Refer to information problems already discussed.	
Western-oriented: Use those supplied by Big6 Media, featuring a worm and an apple.		Kuwaiti-oriented: Use modified transparencies featuring a young, dark-haired boy, but with identical text.
With Big 6 summary transparency displayed, ask if students feel such a strategy would help more than the Super 3. Why or why not? Ask if students feel they may already use these steps unknowingly. If yes, in what situations? (Prompt: buying something, planning a visit to cinema, doing homework.)		
Part 3 15 minutes	Task definition, or asking what questions need to be answered and what needs to be done. Apply Big 6 to information problems last week (London/Kuwait, cheesecake/jeeresh, Statue/Kaaba). Make a brief list on board, which should include:	
Western oriented: 1. weather, places to visit, length of stay, people to meet (gifts), money required, etc. 2. what kind, how many people, baked or unbaked, toppings desired, best recipe. 3. where located, how old, symbolism, uses, visitors, made by whom.		Kuwaiti-oriented 1. weather, places to visit, length of stay, people to meet (gifts), money required, etc. 2. what kind, how many people, chicken or lamb, best recipe. 3. where located, how old, symbolism, uses, visitors, made by whom.
Part 4 10 minutes	<i>The first step in the information solving process is task definition. What is the next step? (Find the answers) How do we find the answers? (Use various resources.) Let's write a list on the board of places where we can find information to solve the information problems. Ask students to list resources, which should include at least:</i>	
Both Western- and Kuwaiti oriented:		
1. newspaper 2. tourist guide 3. other people 4. Internet 5. library books		6. mother and father 7. dictionary 8. encyclopedia 9. teacher 10. etc.
Remaining time	Homework. <i>To practice the important stage of task definition, you will complete the homework about task definition. Begin in class to check understanding.</i>	

**Figure 6.6 Grade 4 Lesson Plan 2**

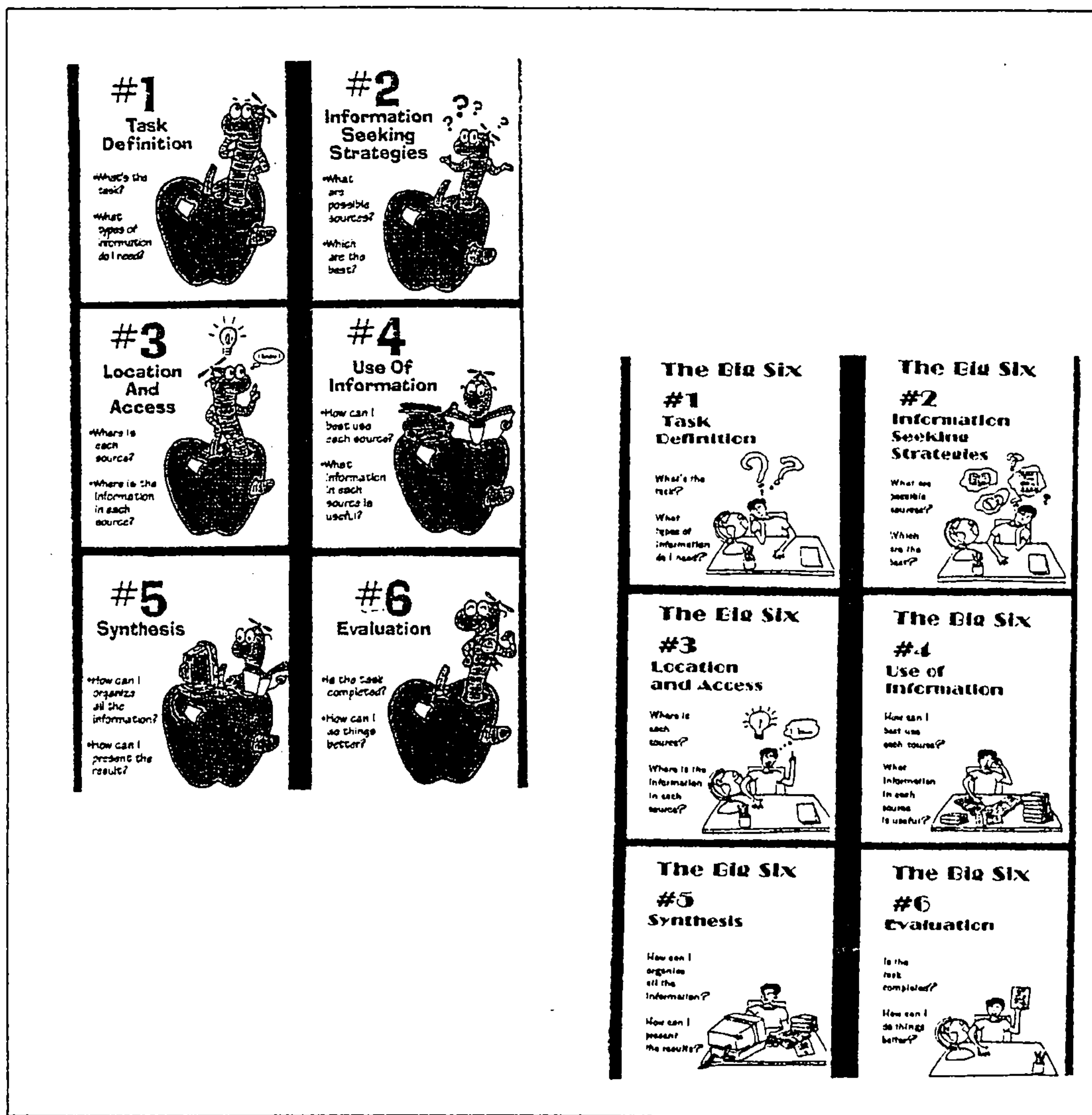


Figure 6.7 Grade 4 Big Six Transparencies

## Lessons 2-7

The Big Six information problem solving strategy was presented during each class session starting with Lesson 2, both the summary transparency (above) and the relevant individual steps that were discussed that day. The set on the left is supplied by Big Six Media (<http://www.big6.com/transparencies.htm>) and used in schools around the world. However, since apples and worms have little, if any, meaning to Kuwaiti students, the researcher created modified Big Six transparencies with permission from the Big Six creators. The modified version, presented on the right, features a young, dark-haired boy.



Name \_\_\_\_\_

### Task Definition

For each information problem stated below, list three questions that could help you solve it. The first one has been done for you.

1. Your teacher wants you to list the ten largest countries of the world.

What countries look the biggest on a map?

What is the area of each country?

Should I list the countries only, or the areas too?

2. You want to buy a present for your cousin.

3. Your science teacher wants you to write a report about the solar system.

4. You want to go to the cinema on the weekend.

5. You think you might like to be a dentist.

**Figure 6.8 Grade 4 Lesson 2 Homework**

Grade 4 Lesson 3/7	<b>Information Seeking Strategies, Location and Access</b>	
Target indicators	1.4: Identifies a variety of potential sources of information. 1.5: Develops and uses successful strategies for locating information.	
General objectives	Discuss information seeking strategies Review search strategies (OPAC, Internet). Review location tools (table of contents, indexes)	
Materials	Whiteboard marker Big 6 summary transparency and transparencies of OPAC screens Homework: resource identification	
Part 1 5 minutes	Review Big 6, especially task definition. Tell students to imagine that they want to go to the cinema on the weekend. List questions related to task definition. (Which cinema? Where is it? What is playing? How much is the ticket? Who will take me? Who will go with me? How long is the movie? etc.) Introduce and define information seeking strategies. <i>We will review strategies for seeking, locating and using information.</i>	
Part 2 10 minutes	Information Seeking Strategies. List some resources that can be used to answer the questions above (newspaper, telephone, friends, map, mom and dad).  After these (and possibly other) resources are listed on the board, ask what other resources might one use to answer <u>any kind</u> of information problem. Continue a list of possible resources to use for a variety of information problems, such as textbooks, non-fiction books, catalogues and indexes, periodicals, computer software, TV, radio, other human resources, etc. ( <u>Mention diwaniya for cultural class.</u> ) Briefly discuss prioritising sources according to ease of use, accuracy, availability, etc.	
Part 3 10 minutes	Search Strategies. <i>The library catalog can help you find the information you need.</i> Review title, author, subject, series and keyword searches on OPAC.	
Western-oriented group: 1. AU: Roald Dahl 2. TI: Hatchet 3. SE: Animorphs 4. SU: England (England + UK) 5. KE: penguin		Kuwaiti-oriented 1. AU: Roald Dahl 2. TI: Aladdin 3. SE: Animorphs 4. SU: England (England + UK) 5. KE: camels
Part 3 15 minutes	Introduce Location and Access: <i>it is the implementation of the information seeking strategy. This involves first finding the information resources that you need, and then finding the appropriate information within the source.</i> Location Skills. Review finding a book in the library according to call numbers. Review table of contents and book index; demonstrate other kinds of indexes: atlas.	
Western-oriented: 1. Show call numbers of items in Part 3. Discuss meaning of labels and location 2. See table of contents and index of social studies textbook: review Mexico City. 3. Street atlas index: London: Index and corresponding map for Bedford Square		Kuwaiti-oriented: 1. Show call numbers of items in Part 3. Discuss meaning of labels and location 2. See table of contents and index of social studies textbook: review Mexico City. 3. Street atlas index: Kuwait: Index and corresponding map for Badr Street in Qadsiya
Remaining time	Homework. Identify potential resources for an information problem. For the research problems listed, choose the correct OPAC search strategy. Answer the questions about the table of contents and index. Due next week.	

Figure 6.9 Grade 4 Lesson Plan 3



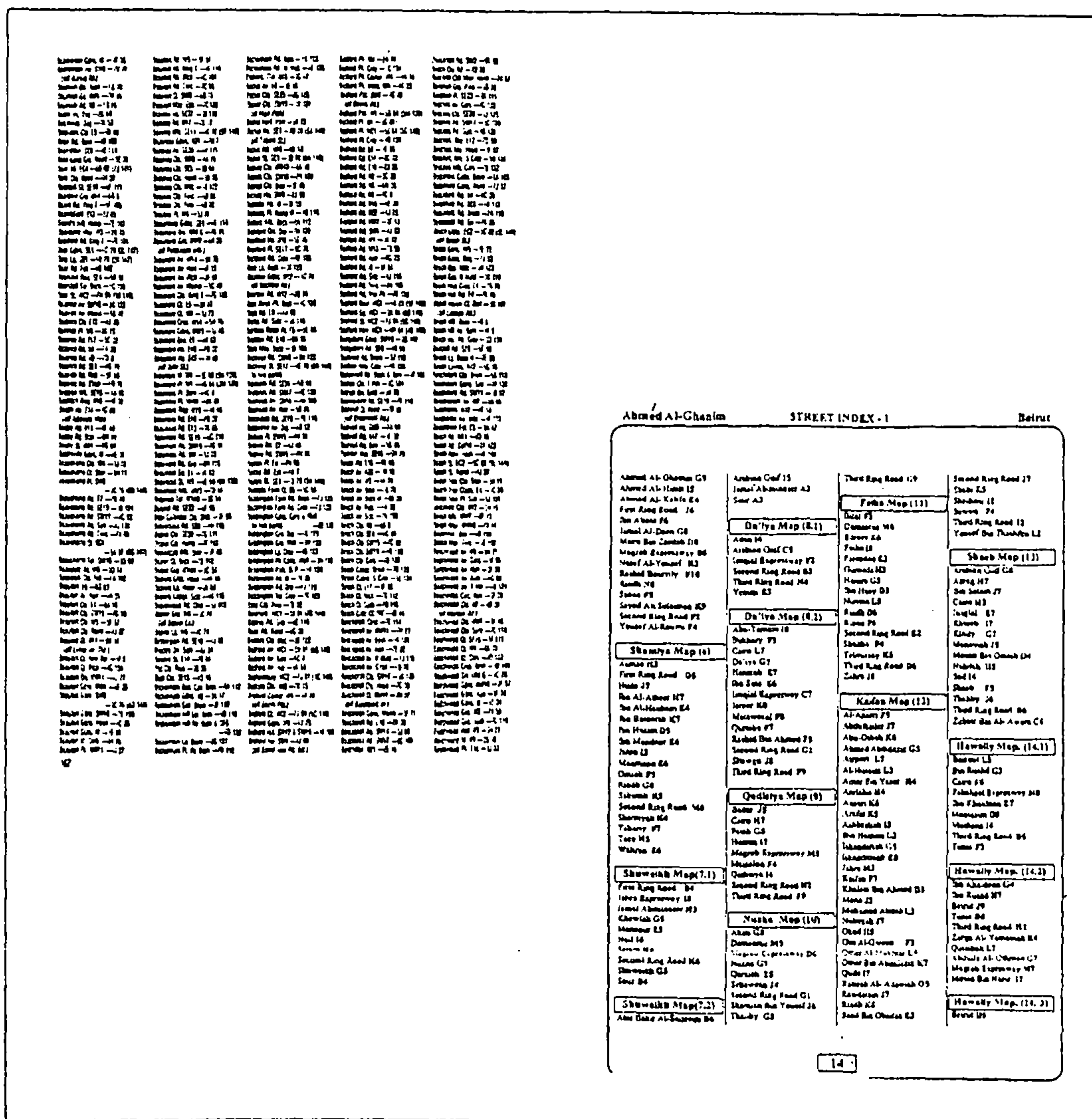


Figure 6.10 Grade 4 Street Atlas 1

### Lesson 3

After discussing author, title, series, subject and keyword searches in the electronic catalogue, and discussing the physical location of items in the library, transparencies of a table of contents and index from the students' social studies book were displayed. After discussing their arrangement, location and contents, students examined pages from a street atlas. According to their group orientations, students viewed either the *Street Atlas of Kuwait*<sup>10</sup> or *London AZ*<sup>11</sup> to practice locational skills. London was chosen for students in the Western-oriented group because it is probably the western city most frequently visited by Kuwaiti families.





Name \_\_\_\_\_

### Information Seeking Strategies

If you wanted to find information for a report about Egypt, you could use library books. List five other resources you could use to find information about Egypt.

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*For the information problems listed below, choose the correct search strategy.*

1. You want any book written by Stephen King.

\_\_\_\_\_ Do a title search and type the word "King."

\_\_\_\_\_ Do a title search and type the word "Stephen."

\_\_\_\_\_ Do an author search and type the word "King."

\_\_\_\_\_ Do an author search and type the word "Stephen."

2. You want to know how many books the library has in the series "The Babysitters' Club".

\_\_\_\_\_ Do a title search and type the words "Babysitters' Club."

\_\_\_\_\_ Do a series search and type the word "Babysitters' Club."

\_\_\_\_\_ Do a keyword search and type the word "Babysitters' Club."

3. You want any book about Egypt.

\_\_\_\_\_ Do a title search and type the word "Egypt."

\_\_\_\_\_ Do a subject search and type the word "Egypt."

\_\_\_\_\_ Do an author search and type the word "Egypt."

Figure 6.12 Grade 4 Lesson 3 Homework (page 1)

4. You want a book that has any information about the Nile River.

\_\_\_\_\_ Do a subject search and type the word "Nile."

\_\_\_\_\_ Do a keyword search and type the word "Nile."

\_\_\_\_\_ Do a title search and type the word "Nile."

1. While doing a subject search in the library, you found a book about Egypt. You want information about the Nile River, which is in Egypt. Put a check beside the idea or ideas below that would show you where in the book you can find information about the Nile.

\_\_\_\_\_ look at the table of contents

\_\_\_\_\_ look on the title page

\_\_\_\_\_ look in the index

\_\_\_\_\_ look in the glossary

6. Which is more detailed, or has more information?

\_\_\_\_\_ the table of contents

\_\_\_\_\_ the index

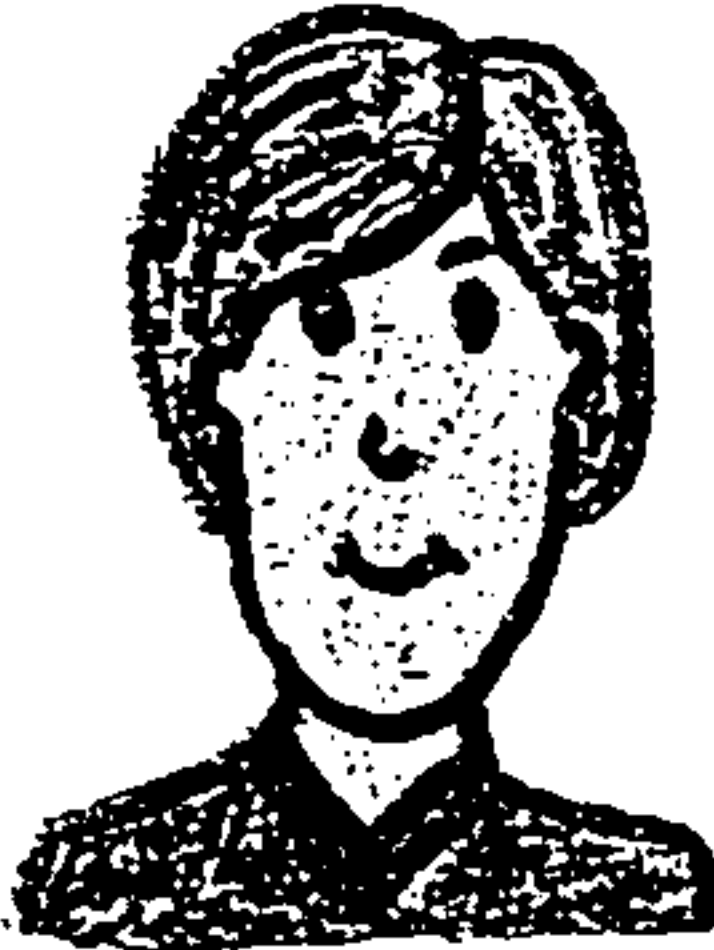
7. The table of contents and index both tell you about the topics in the book. How are they different?

Figure 6.13 Grade 4 Lesson 3 Homework (page 2)



Grade 4 Lesson 4/7	Information Use	
Target indicators	2.1: Determines accuracy, relevance and comprehensiveness. 2.2: Distinguishes among fact, point of view and opinion. 2.3: Identifies inaccurate and misleading information. 2.4: Selects appropriate information for the problem or question.	
General objectives	Define and accuracy, relevance and comprehensiveness. Discuss how point of view influences fact and opinion. Stress the importance of accurate and comprehensive information for intelligent decision making.	
Materials	Whiteboard marker Big 6 summary and student characteristics transparencies Homework: fact and opinion, accuracy, relevance, comprehensiveness.	
Part 1 5 minutes	Review Big 6 summary transparency, stressing location and access. Then introduce information use. <i>Once you have located your source, it is deciding what information is valuable to address the information problem and then extracting that information. It's like collecting shells at the beach. The best way to collect them is to use what is called "Trash and Treasure." When you're looking for shells, you keep the pretty ones, the unique ones, special ones. They are worth keeping. But you leave many behind because they might be too plain, broken, or you already have one like them. There are lots of shells on the beach, and information is the same. Some you trash, some you treasure. That's part of information use.</i>	
Part 2 15 minutes	Point of view. Ask students to define point of view. (Eg: travel by car/airplane) Information is the same; it looks different from different points of view. View transparency of student characteristics. Ask if it is the same person, why or why not? Add faces and names transparencies (Kuwaiti-oriented: Jassim, Fatima and Mishal) (Western-oriented: John, Mary and Tony). Discuss how point of view changes one's opinion.	
	Fact and opinion. Look at list and determine which are facts and which are opinions. <i>Facts are verifiable. Opinions change according to p.o.v. It is important when you are using information to distinguish between fact and opinion. You can use both, but opinions are not always appropriate. Facts are not always available. Trash and treasure facts and opinions according to the task definition and results expectations.</i>	
Part 3 10 minutes	Accuracy. <i>When deciding which information to trash and which to treasure, you should also consider accuracy. Define: exact and correct. Look at list of John/Jassim's characteristics. Which are accurate? Why or why not? Revise # 4&amp;6 to be more accurate. Additional examples:</i>	
	Western-oriented: 1. (Many/50 million) people live in England 2. Detail: small/smaller than an apple 3. Word choice: cool/10 degrees C	Kuwaiti-oriented: 1. (Many/2 million) people live in Kuwait 2. Detail: small/smaller than a date 3. Word choice: hot/45 degrees C
Part 4 5 minutes	Relevance. Define: related to the subject. View transparency of students. Which characteristics are relevant to physical description? To describe personality? Relevance depends on task definition. Say bus driver riddle.	
Part 5 5 minutes	Comprehensiveness. Define: complete. View transparency of students. Is description of (John/Jassim) comprehensive? Why or why not? Depends on task definition: complexity of topic, research question, product expected, etc. For example, ask comprehensiveness of list for "ten statements" vs. "2-page biography."	
Remaining time	Conclusion and homework: Review definitions of words. Stress importance of relevant, accurate and comprehensive information for intelligent decision making. Assign homework, due next week.	

Figure 6.14 Grade 4 Lesson Plan 4




John  
Jassim


1. He has brown eyes
2. He is very clever
3. He gets all B's
4. He is 13 years old
5. He plays soccer well
6. He has short hair
7. He is not friendly
8. He weighs 52 kilos
9. He is 156 cm. tall
10. He has dark skin

1. He has brown eyes
2. He is not very clever
3. He gets all B's
4. He is 13 years old
5. He plays soccer poorly
6. He has long hair
7. He is friendly
8. He weighs 52 kilos
9. He is 156 cm. tall
10. He has light skin



Mary  
Nada



Tony  
Mishal

**Figure 6.15 Grade 4 Information Use**

#### **Lesson 4**

The transparencies used in this lesson are overlays. The first transparency presented to the students is the two lists of characteristics above center. When students were asked whether they describe the same person, it was nearly unanimous that they did not. Then an overlay of the images of three students with either Anglo names or Arab names was placed over the two lists, depending on the groups' orientation. It was explained that both lists describe John/Jassim, the first being from Mary/Nada's point of view and the second being from Tony/Mishal's point of view. Other than the substitution of names, the lessons for the two groups are essentially identical.



Name \_\_\_\_\_

### Matching

- |                     |  |
|---------------------|--|
| _____ fact          | a. related to the subject                    |
| _____ accurate      | b. something that is true                    |
| _____ comprehensive | c. exact and correct                         |
| _____ opinion       | d. complete according to the task definition |
| _____ relevant      | e. a belief or way of thinking               |

### Facts and Opinions

For each sentence, write "F" if it is a fact and "O" if it is an opinion.

- \_\_\_\_\_ 1. There are nine planets in the solar system.
- \_\_\_\_\_ 2. Jupiter is the largest planet.
- \_\_\_\_\_ 3. Saturn is the most beautiful planet.
- \_\_\_\_\_ 4. The tallest plant is the sequoia tree.
- \_\_\_\_\_ 5. It is fun to learn about the solar system.

### Relevance, Comprehensiveness and Accuracy

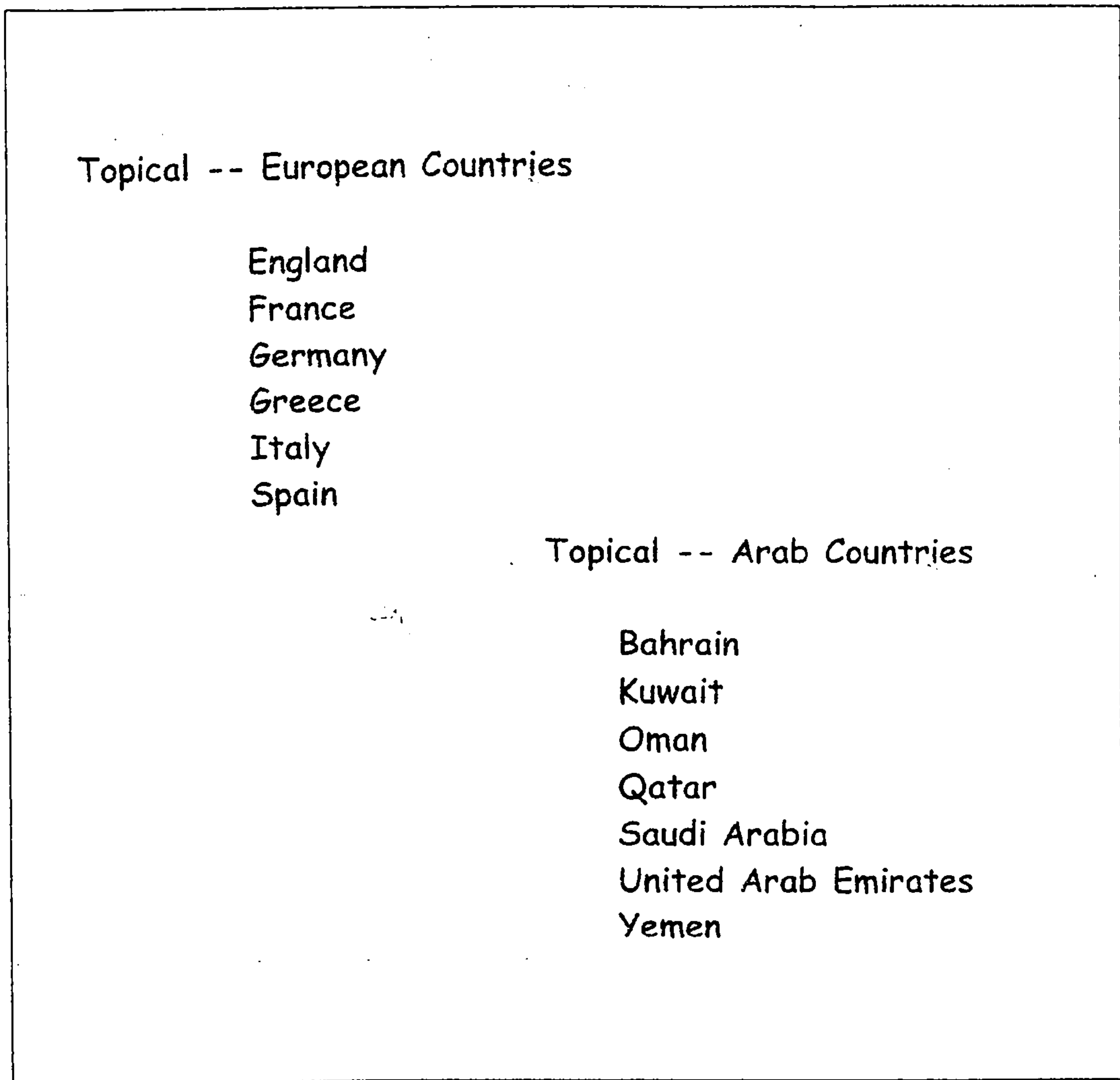
- 6. Which sentence above is not relevant to the solar system? \_\_\_\_\_
- 7. If you were supposed to find five facts about the solar system, is the list above comprehensive? \_\_\_\_\_ yes \_\_\_\_\_ no
- 8. Check the sentence below that is more accurate.
  - \_\_\_\_\_ The tallest plant is an 84-meter high sequoia tree.
  - \_\_\_\_\_ The tallest plant on earth is the sequoia tree.

Figure 6.16 Grade 4 Lesson 4 Homework

Grade 4 Lesson 5/7	<b>Synthesis: Organisation of Information</b>	
Target indicators	3.1: Organises information for practical application.	
General objectives	Define and discuss alternative ways to organise information.	
Materials	Big 6 summary and synthesis transparencies, transparencies of examples. Homework: Organising information.	
Part 1 5 minutes	Show Big 6 summary transparency. Review steps 1-4, concentrating on information use. Then introduce synthesis. <i>Once you have all the information you need to solve the information problem, you will repackaging the information into new or different formats according to the task as defined. Synthesis includes organising and presenting information. Today we will discuss organisation.</i>	
Part 2 20 minutes	Organisation. Define: arranged in an orderly way. Examples: grocery shopping: from store to kitchen. Discuss how items are organised in each place. Discuss numerical and alphabetical organisation; use dictionary, calendar, Dewey system as examples. Introduce topical, hierarchical, chronological, compare/contrast methods of organisation. Transparency and discussion for each example.	
Western-oriented:		Kuwaiti-oriented:
1. Topical: concerning topics: European countries		1. Topical: concerning topics: Arabian Gulf countries
2. Hierarchical: ranks: Biggest to smallest (European countries)		2. Hierarchical: ranks: Biggest to smallest (Arabian Gulf countries)
3. Chronological: in order of time: History of England		3. Chronological: in order of time: History of Kuwait
4. Compare/contrast: similarities and differences: France/Germany		4. Compare/contrast: similarities and differences: Kuwait/Saudi Arabia
Part 3 15 minutes	<p>Class discussion:</p> <p>If your language arts teacher wanted you to write a report about your summer vacation, how could you organise it? Prompts:</p> <ol style="list-style-type: none"> <li>1. topical: list of places or types of places</li> <li>2. hierarchical: my favourite, next favourite, etc.</li> <li>3. chronological: day by day journal</li> <li>4. compare contrast: two cities you visited.</li> </ol> <p>If your teacher wants you to write about each person your family, how could you organise it? Prompts:</p> <ol style="list-style-type: none"> <li>1. topical: each person, in any order</li> <li>2. hierarchical: oldest to youngest</li> <li>3. chronological: who do you see first in the morning, then next, etc.</li> <li>4. compare contrast: how they are the same, how they are different.</li> </ol>	
Part 4 Remaining time	Conclusion and homework: Review definitions of types of organisation. Homework: matching, determining which type of organisation is being described.	

Figure 6.17 Grade 4 Lesson Plan 5





**Figure 6.18    Grade 4 Topical Organisation**

### **Lesson 5**

The first part of Lesson 5 is about the organisation of information, which was introduced by discussing numerical and alphabetical methods. Four additional methods were presented with transparencies. Topical organisation is presented above. Students in the Western-oriented group viewed a list of European countries, and students in the Kuwaiti-oriented group viewed a list of Arab countries.

### Hierarchical -- European Countries

France  
Spain  
Germany  
Italy  
United Kingdom  
Greece

### Hierarchical -- Arab Countries

Saudi Arabia  
Yemen  
Oman  
United Arab Emirates  
Kuwait  
Qatar  
Bahrain

**Figure 6.19 Grade 4 Hierarchical Organisation**

### **Lesson 5**

After viewing either European or Arab countries as a simple topical organisation, students viewed the list rearranged from largest to smallest countries to represent a hierarchical organisation. Students in the Western-oriented group viewed the list of European countries, and students in the Kuwaiti-oriented group viewed the list of Arab countries.



History of England	
55 BC	Julius Caesar invades Britain
407	Romans leave Britain
1066	Normans conquer Britain
1216	First parliament in England
1476	First printing press in England
1666	Great Fire of London
1707	England and Scotland united
1796	Napoleonic wars begin
1833	Britain abolishes slavery

Chronological -- Kuwait's History	
1672	Kuwait town established
1752	Sabah bin Jaber elected as ruler
1760	Kuwait wall is built
1886	First Kuwaiti currency
1911	First school in Kuwait
1938	Oil discovered in Burgan oilfield
1961	Kuwait's independence
1990	Iraq invades Kuwait
1991	Liberation from Iraq

**Figure 6.20 Grade 4 Chronological Organisation**

## Lesson 5

Chronological organisation was represented with a brief history of two countries. Students in the Western-oriented group viewed the history of England, and students in the Kuwaiti-oriented group viewed the history of Kuwait.

### Compare and Contrast

France	Germany
544,000 sq. miles	357,000 sq. miles
57 million people	81 million people
Rivers & mountains	Rivers & mountains
Ancient history	Ancient history
Currency = franc	Currency = mark
Flag colors = blue, white & red stripes	Flag colors = black, red & yellow stripes

### Compare and Contrast

Kuwait	Saudi Arabia
17,818 sq. miles	2,200,000 sq. miles
2 million people	17 million people
Desert land with a small bay	Desert peninsula with mountains
Language = Arabic	Language = Arabic
Currency = dinar	Currency = rial
Flag colors = black, white, red, green	Flag colors = green and white

Figure 6.21 Grade 4 Compare-Contrast Organisation

### Lesson 5

The compare-contrast method of organisation was represented with a chart of the similarities and difference between two countries. Students in the Western-oriented group viewed a comparison of France and Germany, and students in the Kuwaiti-oriented group viewed a comparison of Kuwait and Saudi Arabia.



Name \_\_\_\_\_

Organizing Information

Matching

- \_\_\_\_\_ synthesize

\_\_\_\_\_ organize

\_\_\_\_\_ topical

\_\_\_\_\_ hierarchical

\_\_\_\_\_ chronological

\_\_\_\_\_ compare and contrast
- a. by ranks

b. by topics or subjects

c. to put together in a meaningful way

d. to arrange in an orderly way

e. to show similarities and differences

f. in order of time

Imagine that your teacher wants you to write a report about your family. There are several ways you can organize your report. For each way described below, write in the blank if it is:

- topical
- hierarchical
- chronological
- compare and contrast

You describe each person in the family by saying how they are the same and how they are different.	
You describe each person in the family starting with the oldest to the youngest.	
You describe each person in the family in order of who you see first in the morning, and then who you see next.	
You describe each person in the family but not in any special order.	

Figure 6.22 Grade 4 Lesson 5 Homework

Grade 4 Lesson 6/7	Presentation and Evaluation	
Target indicators	3.4: Produces and communicates information and ideas in appropriate formats.	
General objectives	Define and discuss alternative ways to present information. Define and discuss evaluation.	
Materials	Big 6 summary transparency, synthesis and evaluation transparencies Transparencies of examples. Super Three transparency.	
Part 1 5 minutes	Review Big 6 summary transparency, concentrating on step 5, synthesis. Review four main types of organization. <i>Remember we said that organization means to arrange in an orderly way, like arranging the groceries that you buy from the store...</i>	
Part 2 15 minutes	Presentation of Information. View transparency of ingredients. <i>What could you cook?</i> (pizza, sandwich, salad). Define formats: manner of presentation, or how you put together information to make different things. View visual formats, written formats, and oral formats with transparencies.	
Western-oriented: Transparency of written formats with 3 images, one of them a girl reading a book.		Kuwaiti-oriented: Transparency of written formats with 3 images, one of them a boy in a turban reading a book.
Western-oriented: Transparency of visual formats with 4 images, one of them a camera.		Kuwaiti-oriented: Transparency of visual formats with 4 images, one of them a map of Kuwait.
Western-oriented: Transparency of oral formats with 3 images, one of them a singing hippopotamus.		Kuwaiti-oriented: Transparency of oral formats with 3 images, one of them cleric giving a "khutba" (sermon).
Part 3 10 minutes	Remind students of last week's example of organising information about your summer vacation. Discuss possible formats for presenting the information to others.	
Written: report, journal, poem, etc. Oral: song, speech, etc. Visual: photo album, collage, drawing, etc.		
<i>How could you use all three formats at the same time?</i> Define multimedia as the combination of sound, words and images. Multimedia: videotape with sound and words.		
Part 4 10 minutes	Evaluation: Often ignored by student. View Super 3, View Big 6. Both feature evaluation. <i>Ask yourself: "Was the information problem solved? Does it meet criteria for success? Is it done in a way that I would feel proud about? Did I have a good plan in solving this information problem? Would I do it differently next time? Then view examples below (use transparencies) and assume that you have finished the task. What questions could you ask yourself to evaluate how you solved the information problem?</i>	
Classical: 1. cheesecake recipe 2. preparing for visit to London 3. report about Statue of Liberty		Cultural: 1. jereesh recipe 2. friend preparing for trip to Kuwait 3. report about Kaaba
Part 5 Remaining time	Homework: Presenting information.	

Figure 6.23 Grade 4 Lesson Plan 6



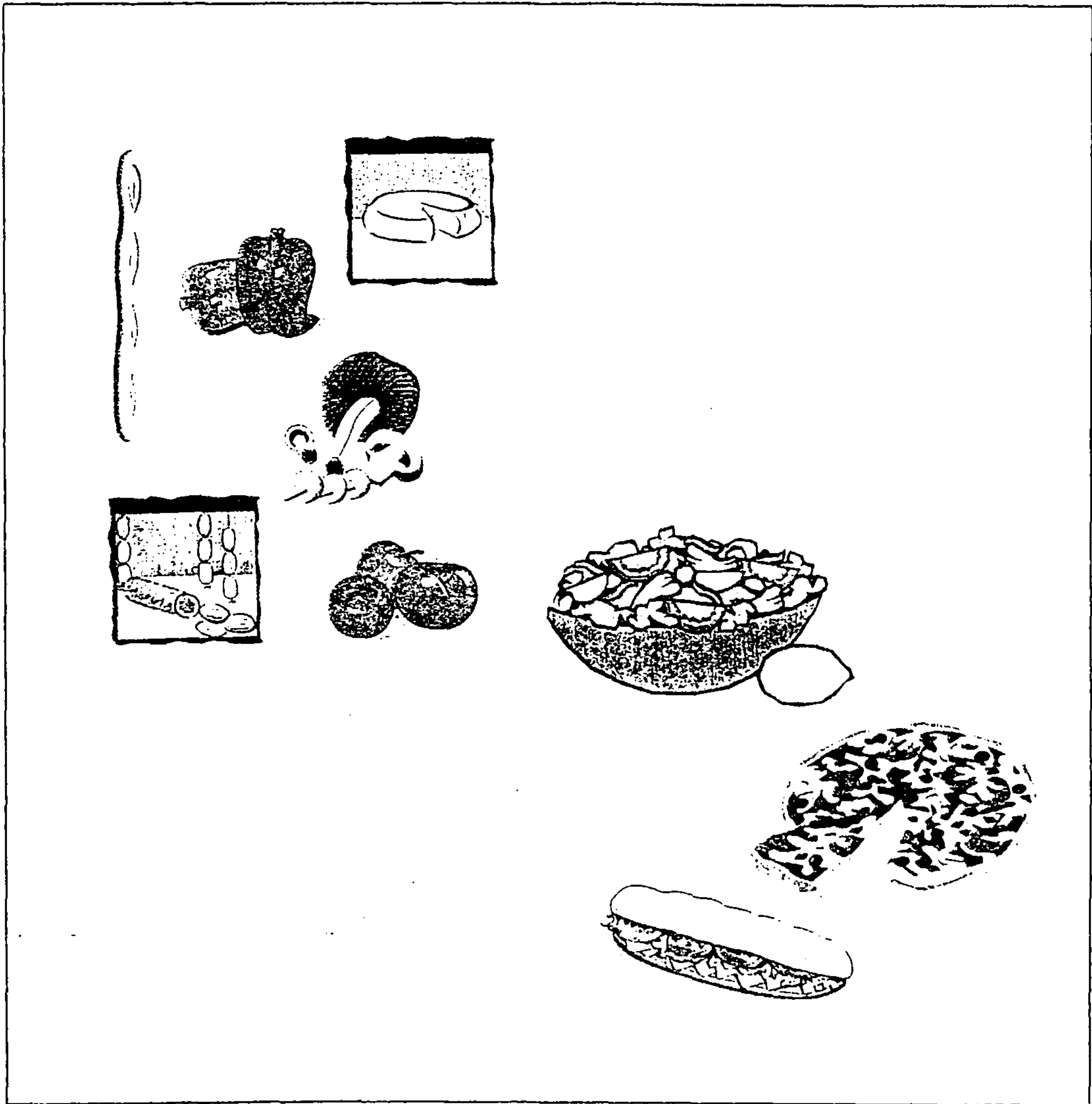


Figure 6.24 Grade 4 Information Formats

## Lesson 6

Lesson 6 was about presenting information in various formats. The researcher presented the transparency on the left and asked students what dish could be prepared with the various ingredients. After discussion, the transparency on the right was presented to demonstrate that various dishes could be prepared with the same ingredients. This analogy introduced the topic of information formats.

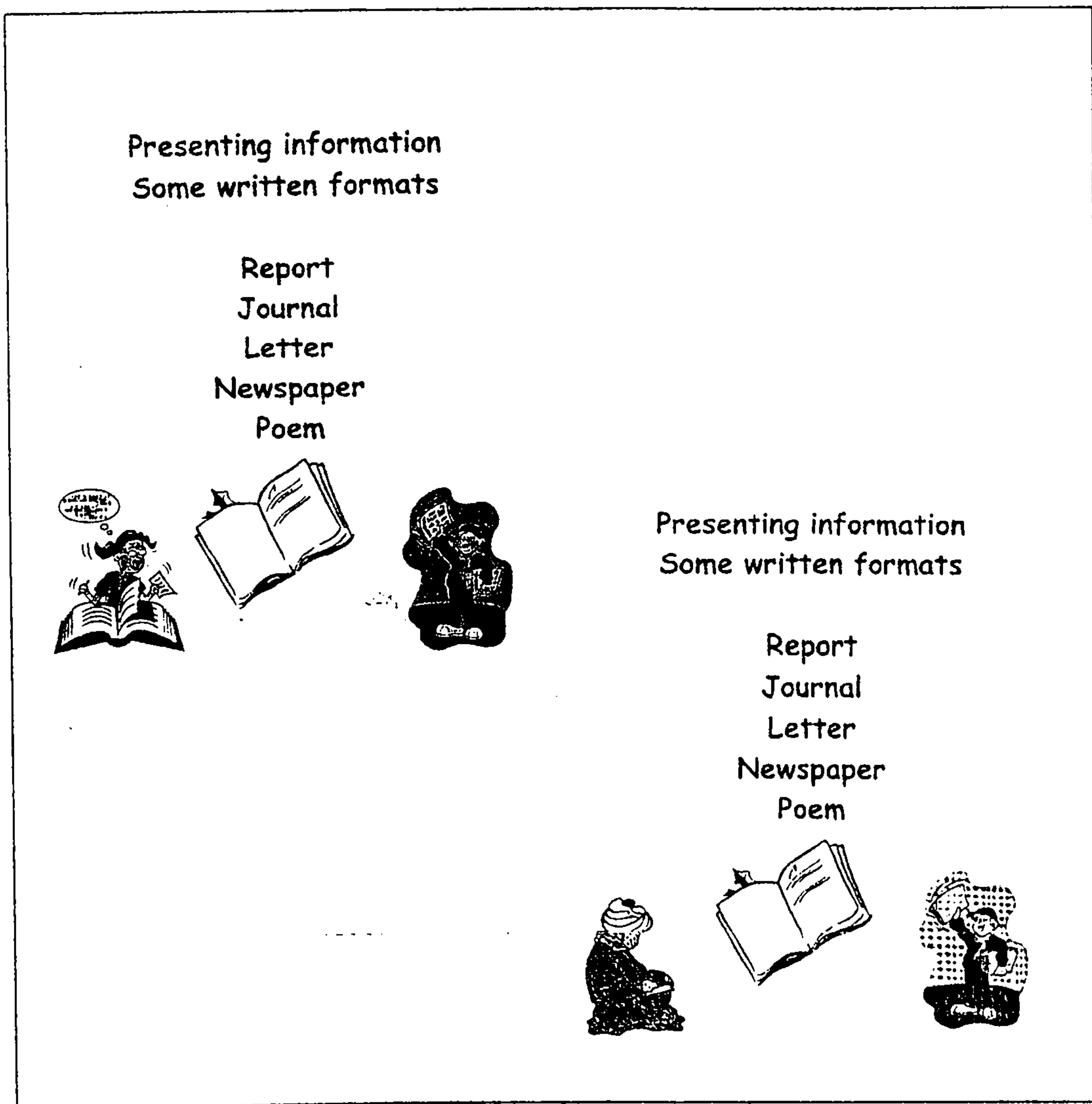


Figure 6.25 Grade 4 Written Formats

## Lesson 6

Lesson 6 was about presenting information in various formats. Written formats were discussed first and students viewed a list of formats and three corresponding images. Students in the Western-oriented group viewed the transparency on the left featuring a boy selling newspapers, a book and a girl reading. Students in the Kuwaiti-oriented group viewed the transparency on the right, which features a boy dressed in what appears to be traditional Arab clothing instead of a girl reading a book. This is the only difference related to written formats.



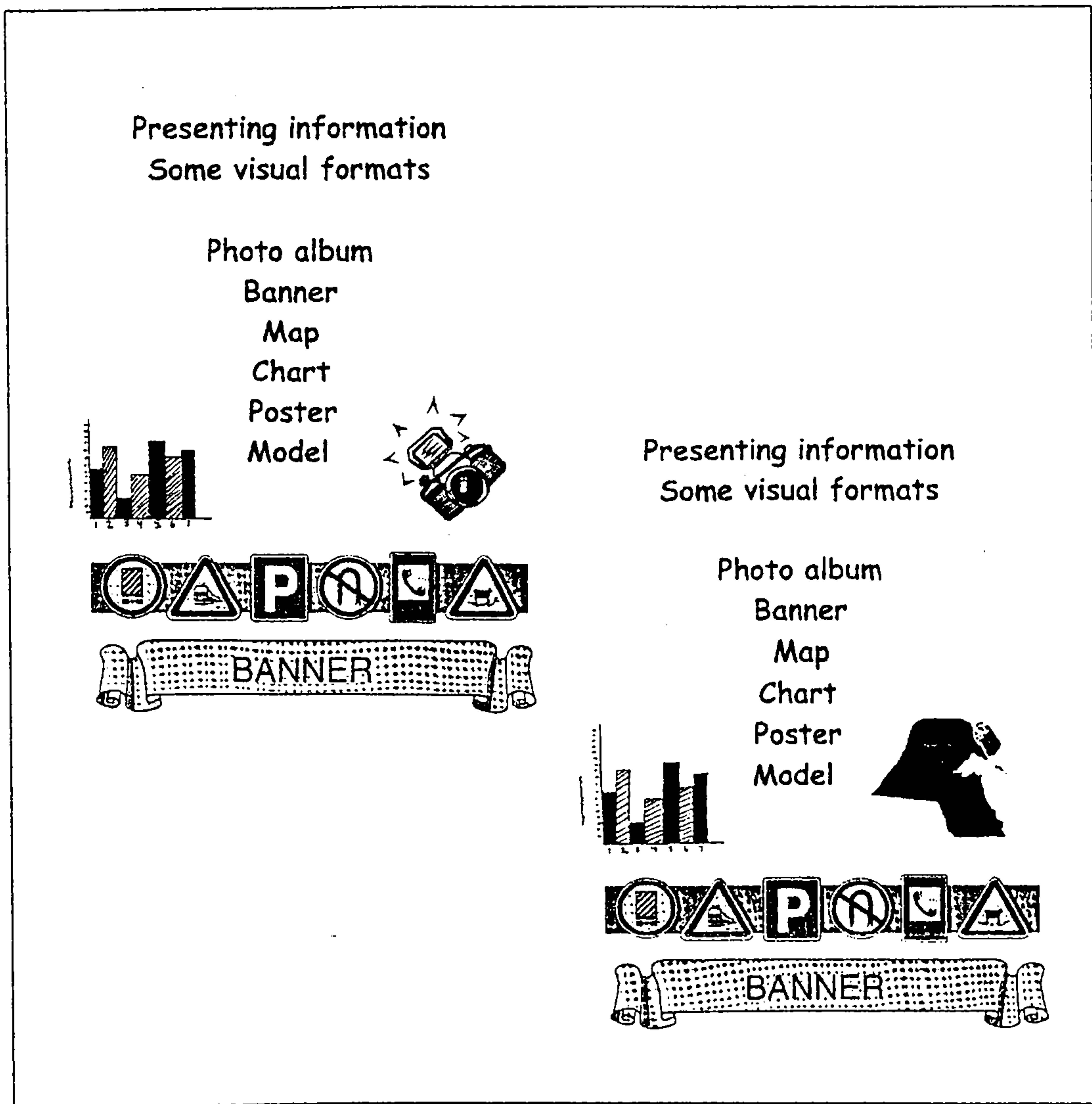


Figure 6.26 Grade 4 Visual Formats

## Lesson 6

Visual formats of presenting information were introduced by showing a transparency featuring a list of six formats and several corresponding images. Students in the Western-oriented group viewed the transparency on the left and students in the Kuwaiti-oriented group viewed the transparency on the right. The only difference in the transparencies is the substitution of the camera (left) with the map of Kuwait (right). The words in the list were briefly discussed since many of the students did not know to what they referred.

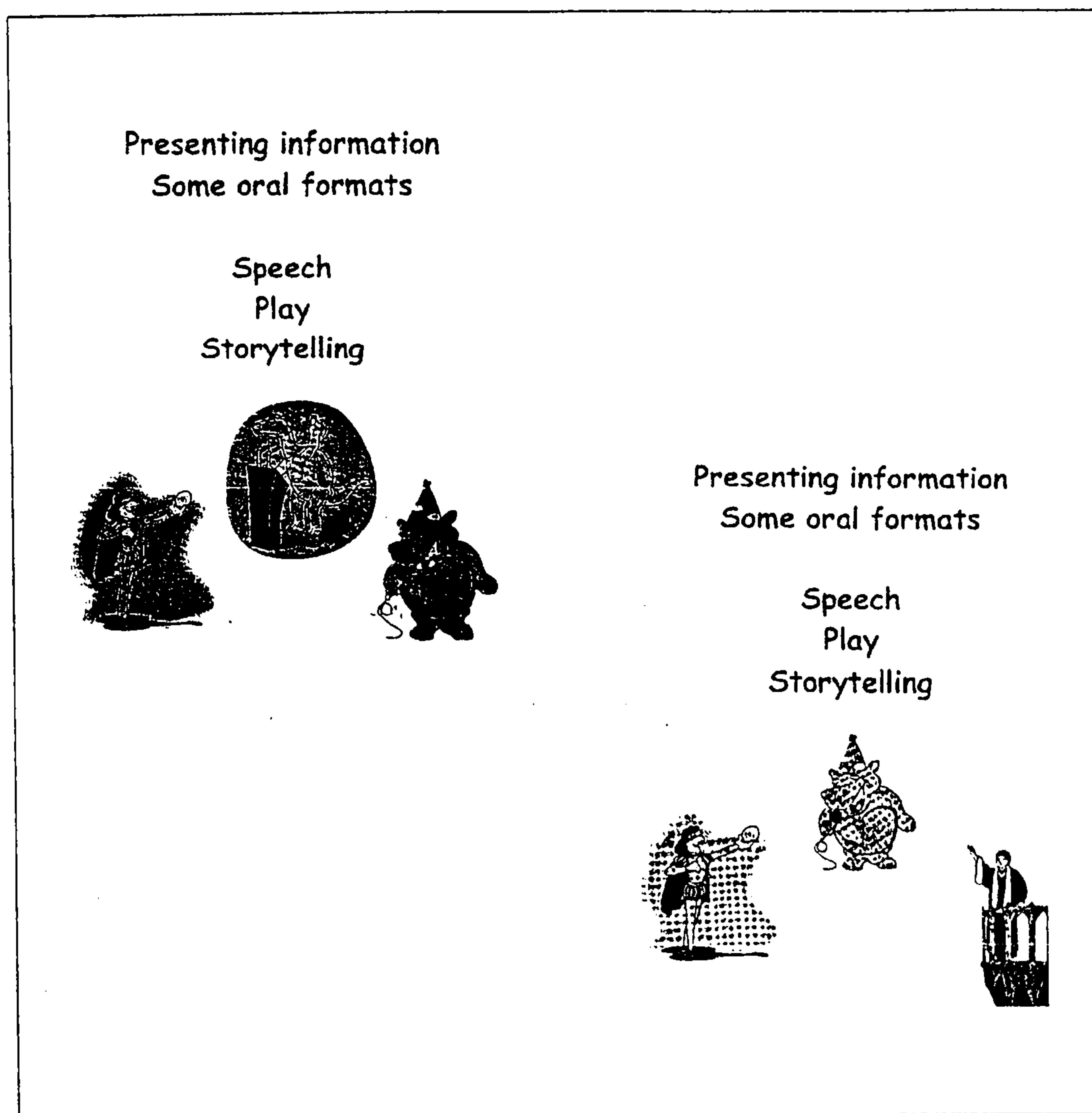


Figure 6.27 Grade 4 Oral Formats

## Lesson 6

Oral formats of presenting information were introduced by showing a transparency featuring a list of three formats and three corresponding images. Students in the Western-oriented group viewed the transparency on the left and students in the Kuwaiti-oriented group viewed the transparency on the right. The only difference in the transparencies is the substitution of the dinosaur (left) with the cleric giving a sermon (right). The students who viewed this image saw it as an image of an imam giving a *khutba* (religious sermon).



Name \_\_\_\_\_

**Presenting Information**

There are many different ways to present what you know or what you have learned. Written formats use words to tell what you know. Visual formats usually use pictures. Oral formats are spoken. List some examples of each type of format below. You can use the words at the bottom of the page for ideas.

Written	Visual	Oral
1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	
5.	5.	
	6.	

- |        |           |             |              |
|--------|-----------|-------------|--------------|
| Map    | Skit      | Cartoon     | Fairy tale   |
| Report | Journal   | Photo album | Banner       |
| Book   | Newspaper | Letter      | Flag         |
| Model  | Poster    | Song        | Play         |
| Speech | Poem      | Chart       | Storytelling |

Figure 6.28 Grade 4 Lesson 6 Homework

Grade 4 Lesson 7/7	Overview of Big Six
Target indicators	all
General objectives	Use the Big Six strategy to solve an information problem.
Location	***The students must be in the library for the second half of the lesson.***
Materials	Whiteboard marker Class work (2 pages), Homework (1 page) Big Six summary transparency Transparencies of examples used
Part 1 25 minutes	<p>Introduction. Review Big Six summary transparency. Ask students if they feel it is useful for solving information problems. <i>Today we are going to use all six steps to solve an information problem.</i> Distribute class work, "Using the Big Six." Students in the Western-oriented group are to find information about Belarus, and students in the Kuwaiti-oriented group are to find information about Mauritania. Students should fill in spaces as the steps are discussed in class.</p> <ol style="list-style-type: none"> <li>1. Referring to step 1, ask what information is needed. List students' suggestions on the board. Explain how important it is to define the task, to avoid unnecessary work. <i>Only 4 items are required: continent, neighbour, population, flag.</i></li> <li>2. Referring to step 2, ask where the required information about their country can be found. List students suggestions on the board. <i>Which is the best place to start?</i> Prompt: encyclopaedia. Circle encyclopaedia.</li> <li>3. Referring to step 3, ask <i>Where can you find an encyclopaedia?</i> (library). <i>Where is the encyclopaedia located?</i> (reference section) <i>Where can you find information about their country?</i> (alphabetical order). Show students a volume of the Oxford Children's Encyclopaedia (1998).</li> <li>4. Referring to step 4, view transparency of pages from encyclopaedia related to the students' respective country. Find answers to 4 questions from the text. Point out irrelevant information (eg., religions and languages spoken) and ask if such information should be included in the presentation (no). Students in Kuwaiti-oriented group will see that Mauritians are Muslim and speak Arabic. Regarding population, point out that the date of the population estimate must be given to increase accuracy. Show students where to find the copyright date of the encyclopaedia.</li> <li>5. Referring to step 5, ask students how they could present the information they found about their country. Refer to task definition and explain that the teacher often determines the organization and presentation of information.</li> <li>6. Remind students to review their work for completeness, accuracy and relevance.</li> </ol>
Part 2 Remaining time	Distribute homework. Each student is assigned a different country to research. They are required to answer the questions in the same manner as class procedures. Students begin the homework in the library and complete it during the week if necessary.

Figure 6.29 Grade 4 Lesson Plan 7



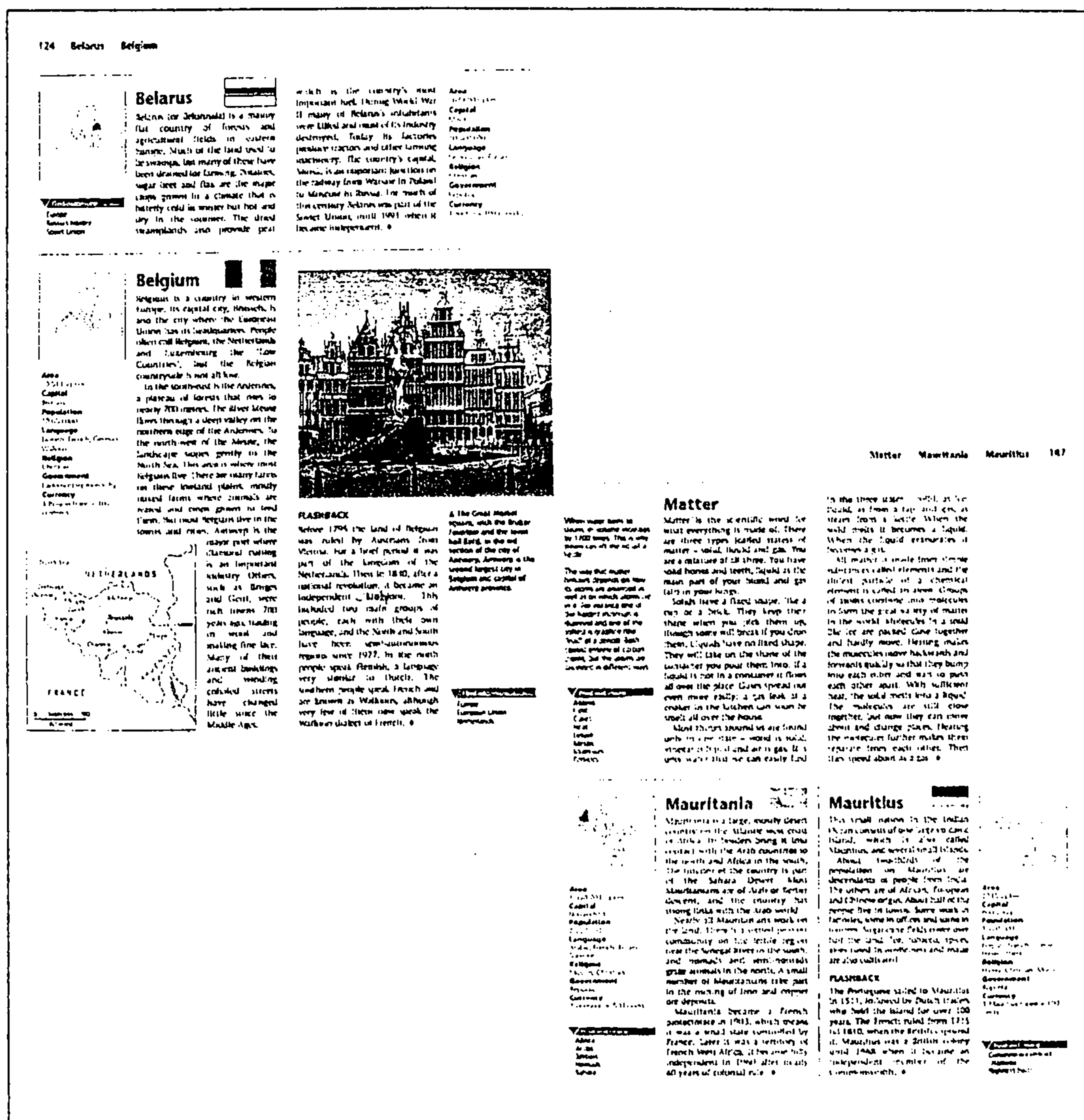


Figure 6.30 Grade 4 Using Encyclopaedias

## Lesson 7

During their application of the Big Six strategy to an information problem, students in the Western-oriented group searched for information about Belarus (on the left) and students in the Kuwaiti-oriented group searched for information about Mauritania (on the right). The images, which are taken from the *Oxford Children's Encyclopaedia*,<sup>12</sup> were viewed as transparencies.

Name \_\_\_\_\_

### Using the Big Six

Let's use the Big Six strategy to solve the following information problem.

Information problem: Find information about the country (Belarus) (Mauritania).

1. Task Definition: ask what needs to be done.

You should ask yourself, "What is the task?" and "What types of information do I need?"

2. Information Seeking Strategies: make a plan to find information.

You should ask yourself, "What are the possible sources?" and "Which are the best?"

Figure 6.31 Grade 4 Lesson 7 Classwork (page 1)



3. Location and Access: find the information that you need.

You should ask yourself, "Where is each source?" and "Where is the information in each source?"

4. Information Use: treasure information that is accurate, relevant and comprehensive.

You should ask yourself, "How can I best use each source? What information in each source is useful?"

5. Synthesis: put it together in a meaningful way.

You should ask yourself, "How can I organize all the information?" and "How can I present the results?"

6. Evaluation: see if you did the job right.

You should ask yourself, "Is the task completed?" and "How can I do things better?"

Figure 6.32 Grade 4 Lesson 7 Classwork (page 2)

Name \_\_\_\_\_

### Using the Big Six to Solve an Information Problem

Information problem: Find information about \_\_\_\_\_.

1. Name which continent your country is in.
2. Name a neighboring country or ocean and say if it is on the north, east, south or west of your country.
3. Write the population of this country.
4. Draw and color the flag below.

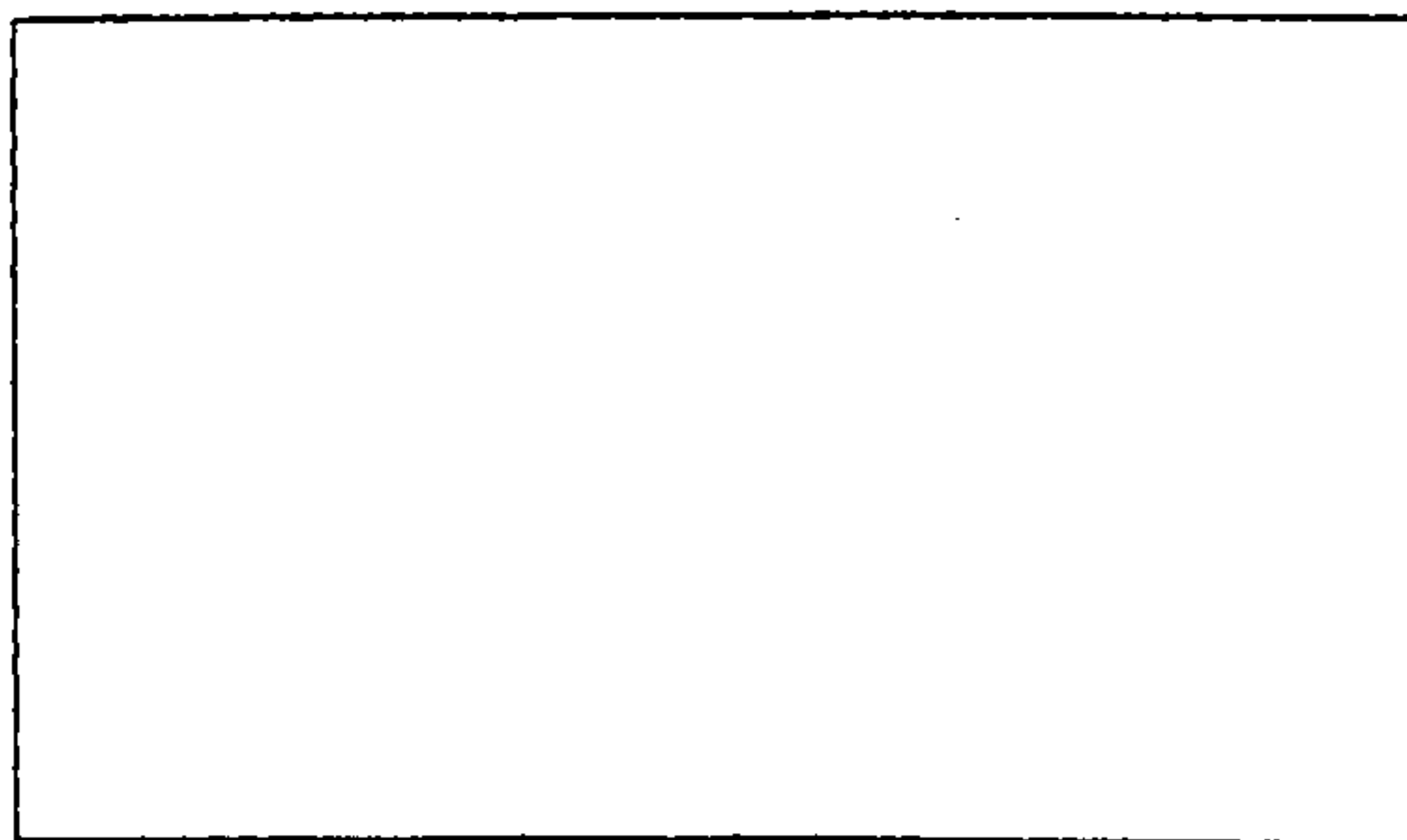


Figure 6.33 Grade 4 Lesson 7 Homework

Grade 8: Lesson 1/5	<b>Introduction and Overview of Big 6</b>	
Target indicators	1.1: Recognizes the need for information. 1.2: Recognizes that accurate and comprehensive information is the basis for intelligent decision making.	
General objectives	Pre-test Discuss information problems Introduce Big 6	
Materials	Pre-test Three information problem transparencies + whiteboard marker Seven Big 6 transparencies	
Part 1 25 minutes	Introduce teacher. Administer pretest, 20 minutes.	
Part 2 15 minutes	Introduce information problems. <i>The test you just took could be called an "information problem" because it is a problem that required information in order to be solved. In addition to tests and other kinds of schoolwork, we face information problems every day. Who can think of an example?</i> After student feedback, view information problem transparencies.	
Western-oriented: 1. Tourist's guide: London 2. Writing a report about the Statue of Liberty 3. Finding a recipe for cheesecake		Kuwaiti-oriented: 1. Tourist's guide: Kuwait 2. Writing a report about the Kaaba 3. Finding a recipe for jereesh
Stress that accurate and comprehensive information is the basis for intelligent decision making. Ask students if they feel that is true, and why or why not. Discuss each transparency again in light of information and intelligent decisions.		
1. Interesting places, where located, when open, how much. 2. Where located, how constructed, size, made by whom, how old, symbolism, uses, visitors. 3. What kind, how many people, baked or unbaked, toppings desired, favorite recipe.		1. Interesting places, where located, when open, how much. 2. Where located, how constructed, size, made by whom, age, symbolism, uses, visitors. 3. What kind, how many people, survey for favorite recipe.
Part 3 15 minutes	Introduce Big 6. <i>This quarter we are going to learn about solving information problems. We are going to learn about something called the Big6, which is strategy for solving information problems. Who can guess how many steps there are in the Big 6? ☺</i> Display Big 6 transparencies one at a time, and ask students to predict next step. Refer to information problems already discussed.	
Western-oriented: Use those supplied by Big6 Media, featuring a worm and an apple.		Kuwaiti-oriented: Use modified transparencies featuring a young, dark-haired boy, but with identical text.
With Big 6 summary transparency displayed, ask if students feel such a strategy would help in decision making. Why or why not? Ask if students feel they may already use these steps unknowingly. If yes, in what situations? (Prompt: buying something, planning a visit to cinema, doing homework.)		
Part 4	Conclusion: <i>Next week each of you will be assigned an information problem to solve over this quarter. We'll go through the Big 6 together...</i>	

Figure 6.34 Grade 8 Lesson Plan 1



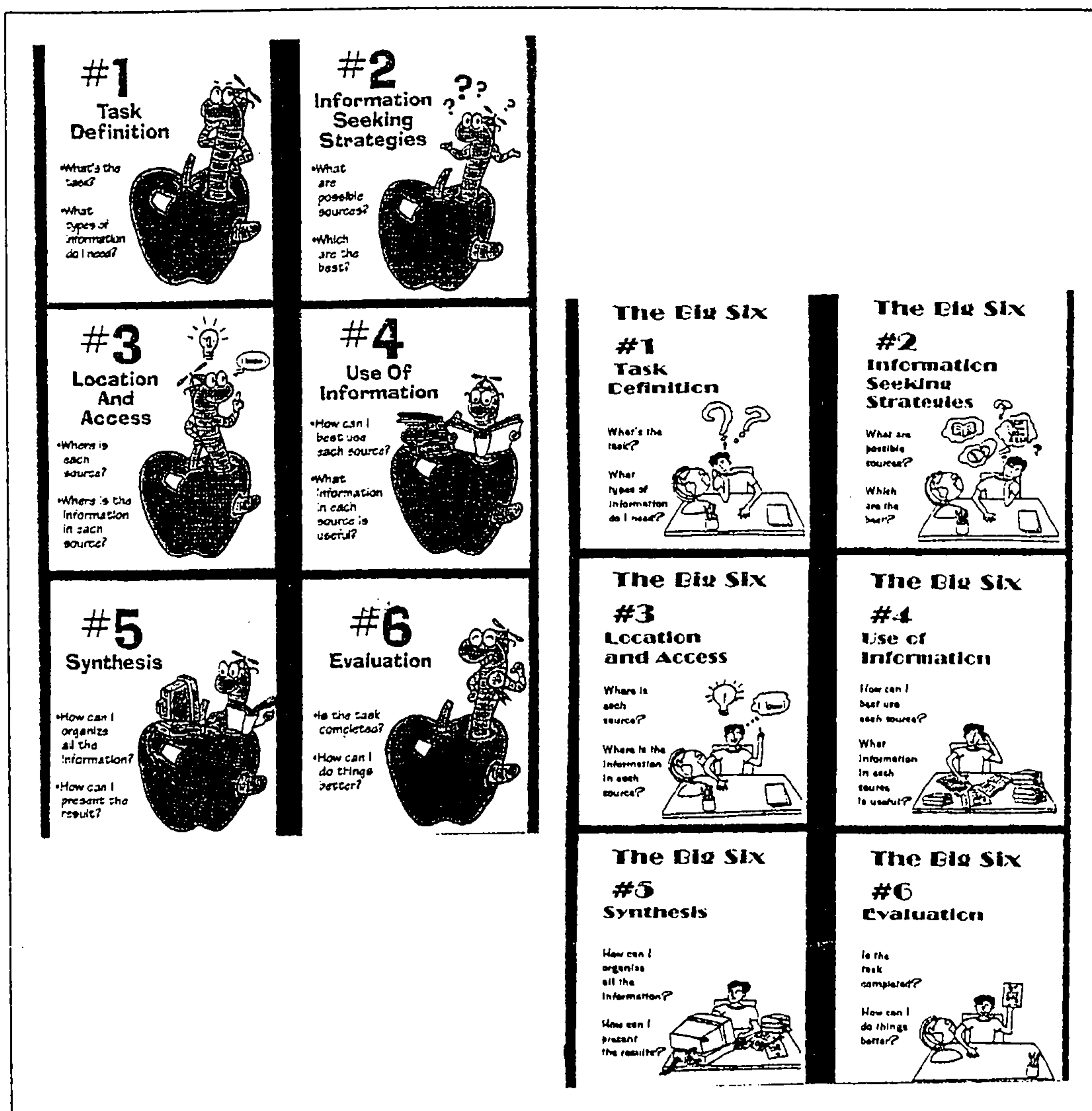


Figure 6.35 Grade 8 Big Six Transparencies

### All lessons

The Big Six information problem solving strategy was presented during each class session, both the summary transparency (above) and the relevant individual steps that were discussed that day. The set on the left is supplied by Big Six Media (<http://www.big6.com/transparencies.htm>) and used in schools around the world. However, since apples and worms have little, if any, meaning to Kuwaiti students, the researcher created modified Big Six transparencies with permission from the Big Six creators.<sup>4</sup> The modified version, presented on the right, features a young, dark-haired boy.

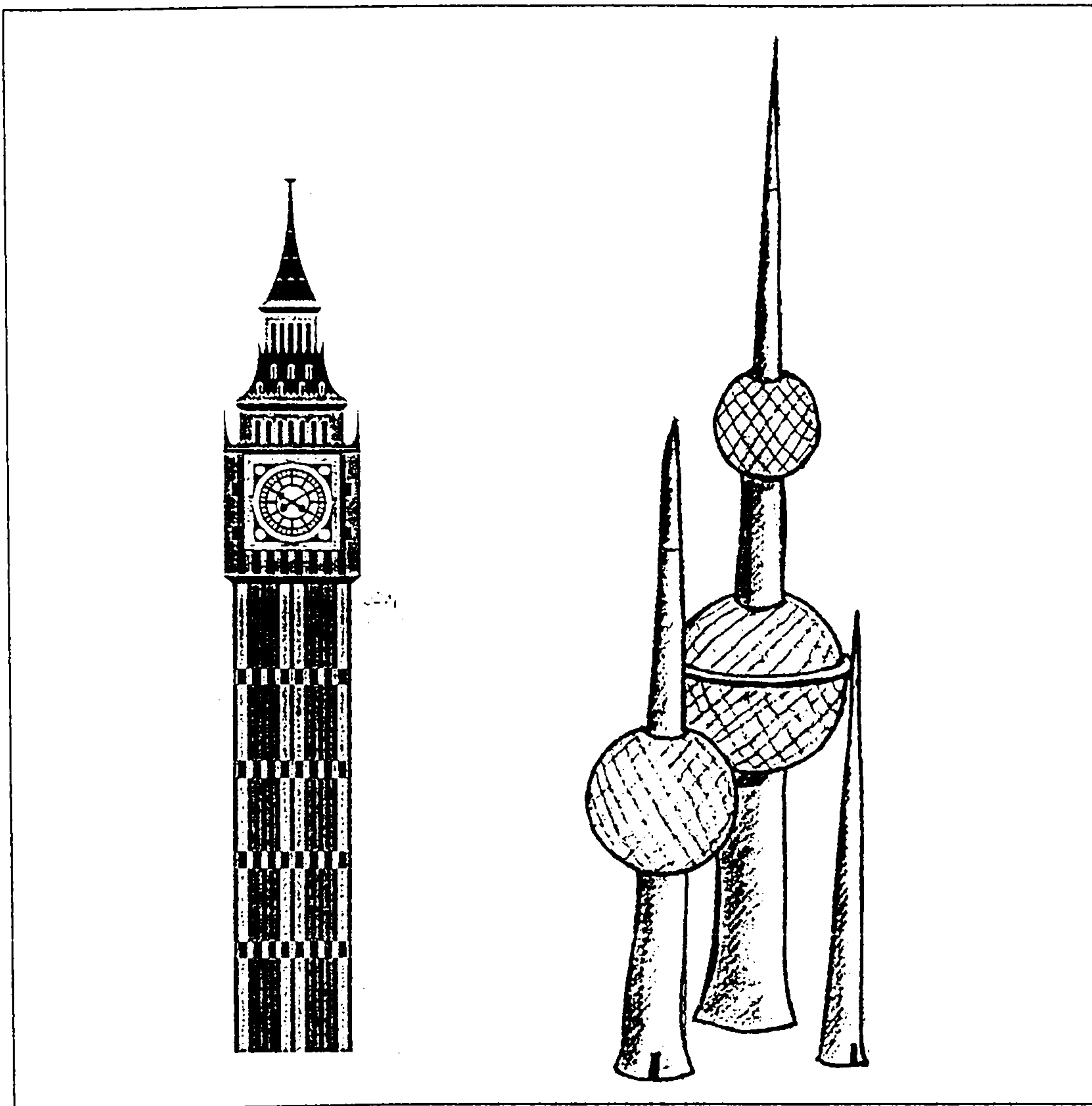


Figure 6.36 Grade 8 Information Problem 1

### Lesson 1

The images above were presented during the discussion of types of information problems. Students were asked to imagine that they wanted to make a tourist guide for either a visit to London or for an English friend's visit to Kuwait. The image of Big Ben was presented to students receiving Western-oriented instruction and the image of Kuwait towers was presented to students receiving Kuwaiti-oriented instruction. Students in each class discussed what information is needed to solve the information problem presented to them.



**Figure 6.37 Grade 8 Information Problem 2**

### **Lesson 1**

The images above were presented during the discussion of types of information problems. Students were asked to imagine that they were required to write a report about a famous landmark. Students in the Western-oriented group viewed the image of the Statue of Liberty and students in the Kuwaiti-oriented group viewed the image of the Kaaba, which is located in Saudi Arabia. Students in each class discussed what information is needed to solve the information problem presented to them.





**Figure 6.38** Grade 8 Information Problem 3

### **Lesson 1**

The images above were presented during the discussion of types of information problems and represented the final information problem discussed in the first class session. Students were asked to imagine that they needed a recipe. The image of cheesecake was presented to the students in the Western-oriented group and the image of jereesh (a savoury porridge with bits of meat or poultry, popular among Kuwaitis) was presented to students in the Kuwaiti-oriented class. Students in each class discussed what information is needed to solve the information problem presented to them.

Grade 8 Lesson 2/5	<b>Task Definition and Information Seeking Strategies</b>
Target indicators	1.3: Formulates questions based on information needs. 1.4: Identifies a variety of potential sources of information.
General objectives	Review information problems and role of Big 6 in solving them Assign project for quarter Discuss task definition and information seeking strategies for project
Materials	Project summary and evaluation sheet for each student Whiteboard marker, Big 6 summary transparency Homework: Task definition & resource identification
Part 1 5 minutes	Review types of information problems. Ask why information is the basis for intelligent decision making. Review Big 6 summary.
Part 2 20 minutes	Task definition. Pass out assignment (without evaluation rubric). Students in Western group get ASEAN assignment. Students in Kuwaiti group get GCC assignment. Ask a student to read the assignment. Ask students how they feel about the assignment. <i>Is it hard? Why or why not? If the Big 6 approach were applied in solving the problem, would it be easier to complete the assignment on time? Let's go through task definition together. What do you need to know to complete the assignment correctly?</i> Students should take notes as teacher makes a list on the board, which should include:  Both Western- and Kuwaiti-oriented:  <div> <div> 1. What are alliances and unions? 2. What is ASEAN/GCC? 3. When was it established? 4. What countries are members? 5. What are its purpose and goals? </div> <div> 6. What is a charter? How does it look? 7. Where can we locate a charter? 8. How should we do the bibliography? 9. How will the project be evaluated? 10. When is the project due? 11. How can I decide on my own union? </div> </div>
Part 3 15 minutes	Information Seeking Strategies. <i>Now that you have specified which questions you need to answer to do your project, what is the next step? (Find the answers) How do we find the answers? (Use various resources.) Beside each question, let's write at least one source that might give us the answer we need. (Students should continue taking notes.)</i>  Both Western- and Kuwaiti-oriented:  <div> <div> 1. dictionary 2. encyclopedia 3. encyclopedia 4. encyclopedia 5. encyclopedia, Internet </div> <div> 6. dictionary, encyclopedia, Internet 7. Internet 8. manual of style, teacher 9. teacher/evaluation sheet provided (discuss) 10. teacher 11. opinions of self, peers, family, etc. </div> </div> <p>After these (and possibly other) resources are listed on the board, ask what other resources might one use to answer any kind of information problem. Continue a list of possible resources to use for a variety of information problems, such as textbooks, non-fiction books, catalogues and indexes, periodicals, computer software, TV, radio, other human resources, etc. (<u>Mention diwaniya for cultural class.</u>) <i>We will learn more about some of these resources and how to use them to locate information next week.</i></p> <p>Discuss prioritising sources according to ease of use, accuracy, availability, etc. For example, should the Internet be used for all the questions in our task definition? Should we consult an adult for all the answers?</p>
Part 4 Remaining time	Homework. <i>During the next week you should answer some of the questions listed on the board so that you can start your project. In addition, you have a homework assignment that will be collected in homeroom tomorrow. Distribute "Task Definition and Resource Identification."</i>

Figure 6.39 Grade 8 Lesson Plan 2

<p>Information Literacy</p> <p>Grade 8 Semester Project</p> <p>Some countries form alliances with other countries in the form of unions, such as ASEAN. Describe this alliance, including</p> <ul style="list-style-type: none"> <li>☆ members</li> <li>☆ date of establishment</li> <li>☆ general purpose</li> <li>☆ major goals</li> </ul> <p>Then suggest an alliance between countries of your choice, stating membership, purpose and goals, in the form of a charter approximately three pages in length. On a separate page, include a bibliography. You can use the evaluation sheet to measure the progress and quality of your work.</p>
<p>Information Literacy</p> <p>Grade 8 Semester Project</p> <p>Some countries form alliances with other countries in the form of unions, such as GCC. Describe this alliance, including</p> <ul style="list-style-type: none"> <li>☆ members</li> <li>☆ date of establishment</li> <li>☆ general purpose</li> <li>☆ major goals</li> </ul> <p>Then suggest an alliance between countries of your choice, stating membership, purpose and goals, in the form of a charter approximately three pages in length. On a separate page, include a bibliography. You can use the evaluation sheet to measure the progress and quality of your work.</p>

**Figure 6.40 Grade 8 Semester Project**

Eighth grade students were required to complete a project over the course of instruction. Students in the Western-oriented group received the assignment presented on the top of Figure 6.40 and students in the Kuwaiti-oriented group received the assignment on the bottom.



Student's Name \_\_\_\_\_ Grade \_\_\_\_\_

Project Evaluation

	Deficient (0 pt.)	Basic (1 pt.)	Proficient (2 pts.)	Exemplary (3 pts.)	Score
<b>Part 1: Alliance Summary</b>					
Relevance	Not relevant	Partial relevance	Mostly relevant	Total relevance	
Accuracy	Not accurate	Partial accuracy	Mostly accurate	Total accuracy	
Comprehensiveness	Not complete	Partially complete	Mostly complete	Total completeness	
<b>Part 2: Charter</b>					
Relevance	Not relevant	Partial relevance	Mostly relevant	Total relevance	
Accuracy	Not accurate	Partial accuracy	Mostly accurate	Total accuracy	
Comprehensiveness	Not complete	Partially complete	Mostly complete	Total completeness	
Neatness	Illegible writing	Legible but not neat	Neatly handwritten	Word processed	
Timeliness	Three or more days late	Two days late	One day late	On time	
Bibliography	Not provided	Information not complete or organized	Partially complete or organized	Complete and organized	
				TOTAL SCORE	

Figure 6.41 Grade 8 Rubric for Semester Project

Name \_\_\_\_\_

### Task Definition and Resource Identification

For each information problem stated below, formulate three questions that could help you solve it. Beside each question, list one resource that could provide the answer. The first one has been done for you.

1. Your teacher wants you to list the ten largest countries of the world.

*What countries look the biggest, for a start? (atlas)*

*What is the area of each country? (almanac, atlas)*

*Should I list the countries only, or the areas too? (teacher)*

2. You want to buy a present for your cousin.

3. Your science teacher wants you to write a report about photosynthesis.

4. You want to go to the cinema on the weekend.

5. You think you might like to be a dentist.

6. For social studies class, write a biography of a current national president.

Figure 6.42 Grade 8 Lesson 2 Homework

Grade 8 Lesson 3/5	<b>Location and Access</b>	
Target indicator	1.5: Develops and uses successful strategies for locating information.	
General objectives	Review search strategies (OPAC, Internet). Review location tools (table of contents, indices) Discuss citing sources and bibliographies.	
Materials	Whiteboard marker Transparencies of OPAC searches Big 6 summary transparency and transparencies of examples cited Bibliography sample sheet. Class work: search strategies. Homework: citations	
Part 1 5 minutes	Monitor project progress. Big 6 summary transparency. Review task definition and information seeking strategies. Then introduce location and access: <i>it is the implementation of the information seeking strategy. This involves first finding the information resources that you need, and then finding the appropriate information within the source. We will review search strategies, location skills and citing sources.</i>	
Part 2 10 minutes	Search Strategies: Review title, author, subject, series and keyword searches on OPAC; view screen contents as transparencies. Stress applicability of SU and KE searches for project. Demonstrate Boolean searching by asking the students to raise their hands according to varying Boolean operators. Explain usefulness for Internet, especially with regard to project.	
Western-oriented group: 1. AU: Roald Dahl 2. TI: Hatchet 3. SE: Animorphs 4. SU: England (England + UK) (synonyms) 5. KE: penguin 6. Boolean: Kuwaiti/14 yrs/only son (daughter)		Kuwaiti-oriented group 1. AU: Roald Dahl 2. TI: Aladdin 3. SE: Animorphs 4. SU: England (England = UK) (synonyms) 5. KE: camels 6. Boolean: Kuwaiti/14 yrs/only son (daughter)
Part 3 15 minutes	Location Skills. Review finding a book in the library according to call numbers. Review table of contents and book index; show transparencies of other kinds of indices: atlas, phonebook	
Western-oriented: 1. Show call numbers of items in Part 2. Discuss meaning of labels and location 2. See table of contents and index of social studies textbook: review "American Indians" 3. Examine Holland phonebook: schools 4. Examine street atlas: London: Index and corresponding map for Bedford Square in London.		Kuwaiti-oriented: 1. Show call numbers of items in Part 2. Discuss meaning of labels and location 2. See table of contents and index of social studies textbook: review "Muslims" 3. Examine Kuwait's phonebook: schools 4. Examine street atlas: Kuwait: Index and corresponding map for Badr Street in Qadsiya.
Part 4 10 minutes	Citing sources. <i>After finding the resources and finding the information, you will use the information. When you find the information you need, it is sometimes important to cite the source. In what situations would you need to cite the source? (statistics, quote, etc.) Why is it important to cite the source? (To give credit, avoid plagiarism, document research in order to relocate information, to lend credibility, etc.) What is included in a citation? How is the bibliography organized? (View transparency of bibliography). Distribute bibliography information sheet and samples; discuss.</i>	
Part 5 Remaining time	Class work: For the research problems listed, write the correct search strategies. Due in class. Homework: Write a bibliography that includes one book, one journal or newspaper article, one Internet site and one encyclopedia article related to your project. They must be real sources. Due next week. Ask if there are questions related to task definition.	

Figure 6.43 Grade 8 Lesson Plan 3





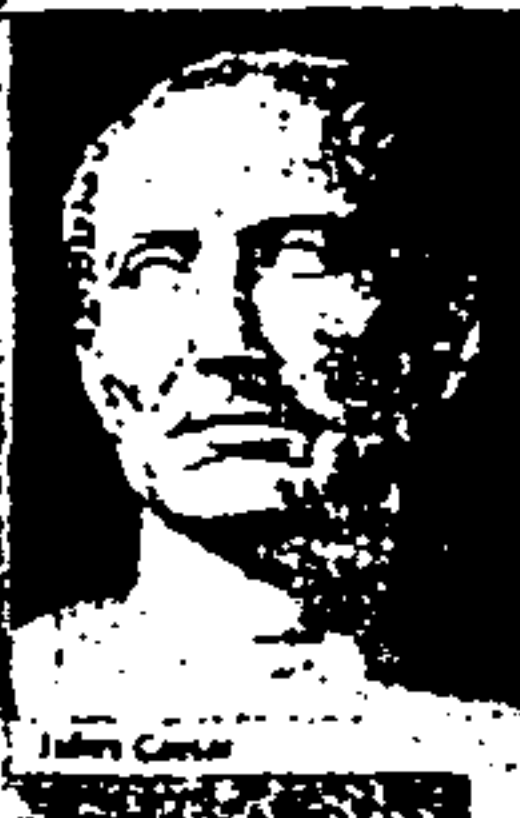

	<p><b>CHAPTER 4</b>  <b>EARLY CIVILIZATIONS IN ASIA AND THE AMERICAS</b> 120  <b>LESSON 1 • Civilization in the Indus Valley</b> 121  <b>LESSON 2 • Civilization in the Huang He Valley</b> 126  <b>GEOGRAPHY SKILL • Use Elevation Maps</b> 132  <b>LESSON 3 • Ancient Civilizations of the Americas</b> 134  <b>READING SKILL • Learn from Artifacts</b> 138  <b>CHAPTER REVIEW</b> 140</p> <p><b>MEETING SOCIAL STUDIES RELEVANT</b>  <i>Why Preserve the Past?</i> 142  <b>STORY CLOTH SUMMARY</b> 144  <b>UNIT REVIEW</b> 146</p>
	<p><b>UNIT 3</b>  <b>ASIA'S CLASSICAL AGE</b> 148</p> <p><i>Lesson 1: The Zhou Dynasty</i>  <i>Lesson 2: The Qin Dynasty</i>  <i>Lesson 3: The Han Dynasty</i></p> <p><b>CHAPTER 5</b>  <b>CHINA</b> 154  <b>LESSON 1 • The Zhou Dynasty</b> 155  <b>THINKING SKILL • Identify Causes and Their Effects</b> 160  <b>LESSON 2 • United Rule in the Qin Dynasty</b> 161  <b>LESSON 3 • Progress Under the Han Dynasty</b> 166  <b>THINKING SKILL • Use a Table to Classify Information</b> 171  <b>CHAPTER REVIEW</b> 172</p>
	<p><b>CHAPTER 8</b>  <b>ANCIENT ROME</b> 236  <b>LESSON 1 • The Roman Republic</b> 237  <b>LESSON 2 • The Roman Empire</b> 243  <b>GEOGRAPHY SKILL • Compare Historical Maps</b> 248</p> <p><b>LESSON 4 • Beginnings of Christianity</b> 250  <b>CHART AND GRAPH SKILL • Read a Telescoping Time Line</b> 259  <b>CHAPTER REVIEW</b> 260</p> <p><b>STANDARD SOCIAL STUDIES SKILL</b>  <i>The Gifts of Civilizations Long Ago</i> 262  <b>STORY CLOTH SUMMARY</b> 264  <b>UNIT REVIEW</b> 266</p>
	<p><b>UNIT 5</b>  <b>RISE OF NEW EMPIRES</b> 268</p> <p><b>CHAPTER 9</b>  <b>HINDUS OF INDIA AND PERSIA</b> 274  <b>LESSON 1 • The Aryan Empire</b> 275  <b>THINKING SKILL • Understand Point of View</b> 280  <b>LESSON 2 • The Muslim Empire</b> 281  <b>LESSON 3 • Europe in the Middle Ages</b> 287  <b>READING SKILL • Understand National Symbols</b> 294</p> <p><b>CHAPTER REVIEW</b> 296  <b>UNIT REVIEW</b> 302</p>

Figure 6.44 Grade 8 Table of Contents

### Lesson 3

After discussing author, title, series, subject and keyword searches in the electronic catalogue, and discussing the physical location of items in the library, transparencies of table of contents were displayed. The first example was taken from the students' social studies book.<sup>13</sup> Students in the Western-oriented group examined the table of contents for information about American Indians and found a lesson mentioned on the page on the left. Students in the Kuwaiti-oriented group examined the table of contents for information about Muslims and found a lesson mentioned on the page on the left.





1010 Reference-Guide Index To The Yellow Pages	
<p>Advertising Agencies 120</p> <p>Architectural Firms 120</p> <p>Automotive Repair &amp; Maintenance 120</p> <p>Banks &amp; Finance 120</p> <p>Beauty Salons &amp; Hair Styling 120</p> <p>Business Consultants 120</p> <p>Child Care &amp; Daycare 120</p> <p>Cleaning &amp; Janitorial Services 120</p> <p>Construction &amp; Building 120</p> <p>Conventions &amp; Travel 120</p> <p>Education &amp; Tutoring 120</p> <p>Electrical Contractors 120</p> <p>Employment Agencies 120</p> <p>Engineering &amp; Surveying 120</p> <p>Environmental Services 120</p> <p>Event Planning &amp; Catering 120</p> <p>Exhibits &amp; Displays 120</p> <p>Facilities Management 120</p> <p>Financial Services 120</p> <p>Food &amp; Beverage 120</p> <p>Freight &amp; Logistics 120</p> <p>Funeral Homes 120</p> <p>Garden &amp; Landscaping 120</p> <p>Gift Basket Services 120</p> <p>Health &amp; Wellness 120</p> <p>Held Services 120</p> <p>Home Inspection &amp; Appraisal 120</p> <p>Insurance 120</p> <p>Interior Design 120</p> <p>Investment Services 120</p> <p>Job Training &amp; Development 120</p> <p>Legal Services 120</p> <p>Life Insurance 120</p> <p>Manufacturing &amp; Industrial 120</p> <p>Marketing &amp; Public Relations 120</p> <p>Medical Equipment &amp; Supplies 120</p> <p>Mental Health Services 120</p> <p>Moving &amp; Storage 120</p> <p>Music &amp; Entertainment 120</p> <p>Nail Salons 120</p> <p>Non-Profit Organizations 120</p> <p>Office Equipment &amp; Supplies 120</p> <p>Online Services 120</p> <p>Optical Services 120</p> <p>Outsourcing &amp; Staffing 120</p> <p>Painting &amp; Decorating 120</p> <p>Party Planning &amp; Supplies 120</p> <p>Personal Services 120</p> <p>Pharmacies &amp; Drug Stores 120</p> <p>Physical Therapy &amp; Rehabilitation 120</p> <p>Plumbing &amp; Pipefitting 120</p> <p>Real Estate 120</p> <p>Recycling &amp; Waste Management 120</p> <p>Religious Organizations 120</p> <p>Restaurants &amp; Food Service 120</p> <p>Retail Stores 120</p> <p>Risk Management 120</p> <p>Security Services 120</p> <p>Senior Services 120</p> <p>Shipping &amp; Freight 120</p> <p>Signage &amp; Banners 120</p> <p>Software &amp; IT Services 120</p> <p>Social Services 120</p> <p>Southern Services - South &amp; West 120</p> <p>Spa &amp; Wellness 120</p> <p>Specialty Services 120</p> <p>Sports &amp; Recreation 120</p> <p>Staffing &amp; Recruitment 120</p> <p>Telecommunications 120</p> <p>Temporary Employment 120</p> <p>Travel Agencies 120</p> <p>Translation &amp; Interpreting 120</p> <p>Transportation &amp; Logistics 120</p> <p>Used Car Dealerships 120</p> <p>Veterinary Services 120</p> <p>Video Production &amp; Services 120</p> <p>Waste Management 120</p> <p>Wholesale Distributors 120</p> <p>Wine &amp; Spirits 120</p> <p>Writing &amp; Editing Services 120</p> <p>Yoga &amp; Fitness 120</p>	<p>Accounting &amp; Finance 120</p> <p>Advertising &amp; Marketing 120</p> <p>Architecture &amp; Design 120</p> <p>Automotive &amp; Transportation 120</p> <p>Business &amp; Industry 120</p> <p>Child &amp; Family Services 120</p> <p>Cleaning &amp; Maintenance 120</p> <p>Construction &amp; Building 120</p> <p>Conventions &amp; Travel 120</p> <p>Education &amp; Training 120</p> <p>Electrical &amp; Mechanical 120</p> <p>Employment &amp; Staffing 120</p> <p>Engineering &amp; Surveying 120</p> <p>Environmental &amp; Waste 120</p> <p>Event Planning &amp; Catering 120</p> <p>Exhibits &amp; Displays 120</p> <p>Facilities Management 120</p> <p>Financial Services 120</p> <p>Food &amp; Beverage 120</p> <p>Freight &amp; Logistics 120</p> <p>Funeral Homes 120</p> <p>Garden &amp; Landscaping 120</p> <p>Gift Basket Services 120</p> <p>Health &amp; Wellness 120</p> <p>Held Services 120</p> <p>Home Inspection &amp; Appraisal 120</p> <p>Insurance 120</p> <p>Interior Design 120</p> <p>Investment Services 120</p> <p>Job Training &amp; Development 120</p> <p>Legal Services 120</p> <p>Life Insurance 120</p> <p>Manufacturing &amp; Industrial 120</p> <p>Marketing &amp; Public Relations 120</p> <p>Medical Equipment &amp; Supplies 120</p> <p>Mental Health Services 120</p> <p>Moving &amp; Storage 120</p> <p>Music &amp; Entertainment 120</p> <p>Nail Salons 120</p> <p>Non-Profit Organizations 120</p> <p>Office Equipment &amp; Supplies 120</p> <p>Online Services 120</p> <p>Optical Services 120</p> <p>Outsourcing &amp; Staffing 120</p> <p>Painting &amp; Decorating 120</p> <p>Party Planning &amp; Supplies 120</p> <p>Personal Services 120</p> <p>Pharmacies &amp; Drug Stores 120</p> <p>Physical Therapy &amp; Rehabilitation 120</p> <p>Plumbing &amp; Pipefitting 120</p> <p>Real Estate 120</p> <p>Recycling &amp; Waste Management 120</p> <p>Religious Organizations 120</p> <p>Restaurants &amp; Food Service 120</p> <p>Retail Stores 120</p> <p>Risk Management 120</p> <p>Security Services 120</p> <p>Senior Services 120</p> <p>Shipping &amp; Freight 120</p> <p>Signage &amp; Banners 120</p> <p>Software &amp; IT Services 120</p> <p>Social Services 120</p> <p>Southern Services - South &amp; West 120</p> <p>Spa &amp; Wellness 120</p> <p>Specialty Services 120</p> <p>Sports &amp; Recreation 120</p> <p>Staffing &amp; Recruitment 120</p> <p>Telecommunications 120</p> <p>Temporary Employment 120</p> <p>Travel Agencies 120</p> <p>Translation &amp; Interpreting 120</p> <p>Transportation &amp; Logistics 120</p> <p>Used Car Dealerships 120</p> <p>Veterinary Services 120</p> <p>Video Production &amp; Services 120</p> <p>Waste Management 120</p> <p>Wholesale Distributors 120</p> <p>Wine &amp; Spirits 120</p> <p>Writing &amp; Editing Services 120</p> <p>Yoga &amp; Fitness 120</p>

Figure 6.46 Grade 8 Index 2

### Lesson 3

After viewing the table of contents and index in their social studies book and discussing their arrangement, location and contents, students examined pages from a telephone book as an example of a whole-book index. Students in the Western-oriented group viewed the index to the yellow pages of Holland, Michigan (USA),<sup>14</sup> which is the researcher's hometown. Students in the Kuwaiti-oriented group viewed the index from Kuwait's yellow pages.<sup>15</sup> Neither phonebook had been seen previously by any of the students, since Kuwait's yellow pages is a new publication and not yet a part of the average home library.





Figure 6.47 Grade 8 Index 3

### Lesson 3

To continue the discussion on whole-book indexes, each group of students located “schools” in the phone book index and then located the pages corresponding to that entry. The sample pages presented above were taken from the Holland, Michigan and Kuwait yellow pages and were viewed by the Western-oriented and Kuwait-oriented groups, respectively.

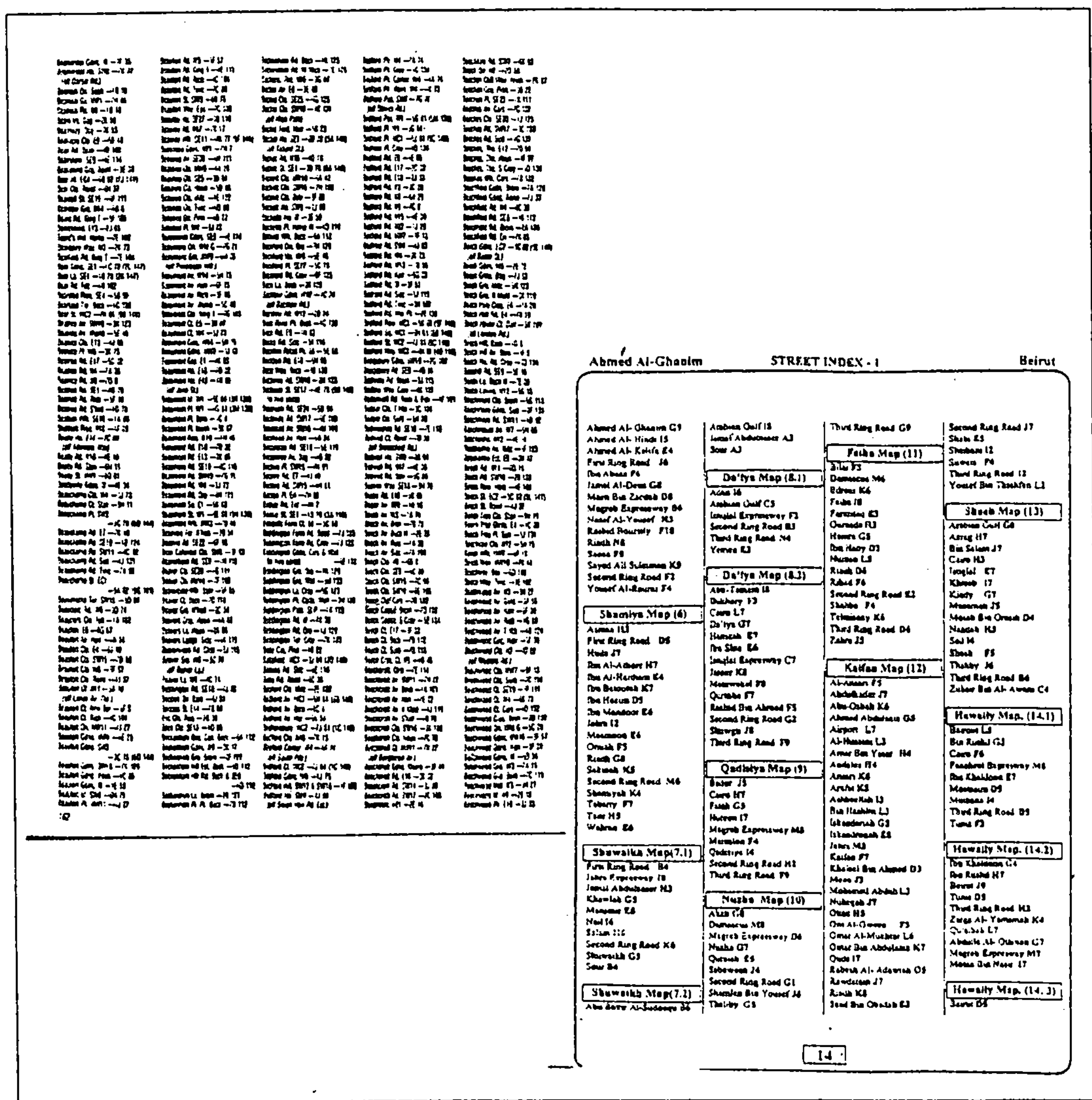


Figure 6.48 Grade 8 Index 4

### Lesson 3

To further study indexes, transparencies of street atlas indexes are first displayed, followed by colour copies of street maps (following page). According to their group orientations, students viewed either the *Street Atlas of Kuwait*<sup>16</sup> or *London AZ*<sup>17</sup> to practice locational skills. London was chosen for students in the Western-oriented group because it is probably the western city most frequently visited by Kuwaiti families.



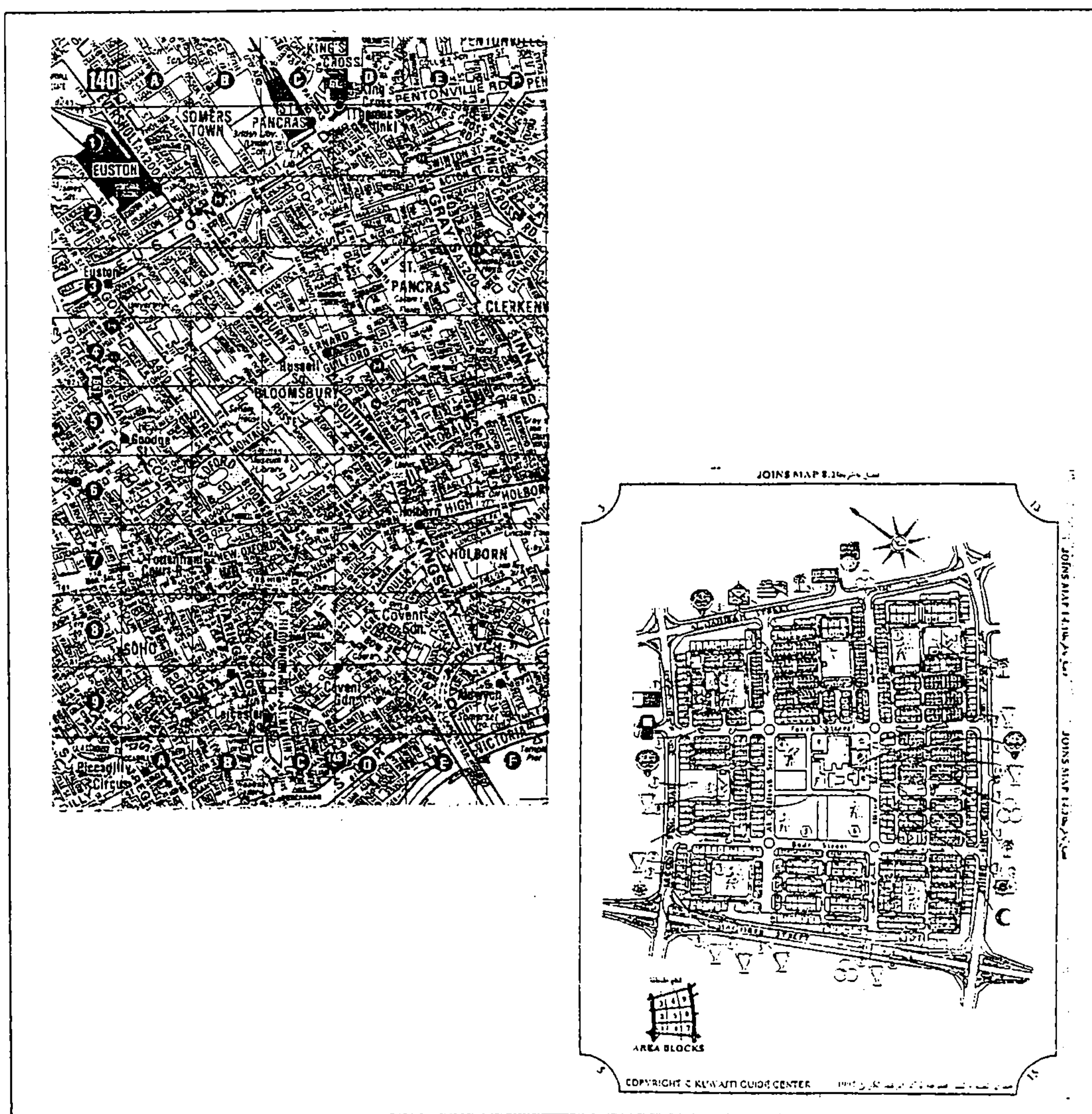


Figure 6.49 Grade 8 Index 5

### Lesson 3

Students in the Western-oriented group located Bedford Square in the index of *London AZ* and then viewed the corresponding map on a transparency. Once Bedford Square was located, nearby landmarks were pointed out, including the British Museum and Library and St. Pancras rail station. Students in the Kuwaiti-oriented group located Qadsiya in the index of the *Street Atlas of Kuwait*, and then viewed the corresponding map on a transparency. The map was examined to locate Badr Street.



Name \_\_\_\_\_

### Citing Information Sources

A bibliography at the end of a research paper is a list of sources used to write the paper. It may include books, periodicals, encyclopedias, Internet sources, and so forth. You should cite your sources for important reasons:

- ☆ To give credit to other authors. "Even when you don't use direct quotes, you need to report the sources you used because you took the ideas from those sources and incorporated them with your own. You inform your audience that those creators helped you learn what you just reported in your paper." (List, 127)
- ☆ To avoid plagiarism, which is stealing the ideas and writing of somebody else and using them as your own.
- ☆ To document your research. Citing sources is commendable and enables the researcher and the reader to find the exact source that was used.

There are precise and consistent standards that should be followed when citing your sources. In general, you must include author, title and publishing information in each citation. The citations are then alphabetized by the author's last name. You can use the guide below to help you write a bibliography in a standard way. The citations were written according to MLA (Modern Language Association) format. There are also other citation styles that may be used. Consistency is the key.

#### Book Citation

Author's Lastname, Then Firstname. *The Title of the Book is Capitalized and Underlined or Put in Italics: The Subtitle is Also Included.* City: Publisher, YEAR.  
(for example: Smith, Joe. *Cloning: To Be or Not To Be.* London: Hanes, 1999.)

#### Encyclopedia Article

*Name of Encyclopedia in Italics*, number of edition, s.v. "the word(s) looked up."  
(for example: *World Book*, 9<sup>th</sup> ed., s.v. "genetic engineering.")

#### Periodical Article Citation

Author's Lastname, Then Firstname. "The Title of the Article is Capitalized and Put in Quotation Marks." *Journal Title is not Abbreviated and is Underlined or Put in Italics* vol:number (YEAR): page-page.  
(for example: Smith, Joe. "Cloning," *Science Today* 10:4 (1999): 14-19.)

#### Web Site Citation

Author's Lastname if provided, Then Firstname. "Title of the Document in Quotation marks." *Title of the Web Site is Underlined or in Italics.* Year. <http://www.url/complete/URL/here> (day-month-year that you accessed the site).  
(for example: Smith, Joe. "Cloning." *Imaginary Scientists*. 1999. <http://www.space.net> (25-6-99).

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List, Carla. *Introduction to Information Research.* Dubuque, Iowa: Kendall/Hunt Publishing Company, 1998.

**Figure 6.50 Grade 8 Bibliography sample sheet**

Name \_\_\_\_\_

**First Quarter Project  
Bibliography Sample Sheet**

Instructions: In the spaces provided, write a bibliography that includes one book, one periodical article, one Internet site and one encyclopedia article related to your project. They must be real sources and may be checked for validity.

Book

Journal or newspaper article

Internet site

Encyclopedia article

**Figure 6.51 Grade 8 Lesson 3 Homework**

Name \_\_\_\_\_

### Information Seeking Strategies

Part I: For the research questions below, circle the best answer for an information seeking strategy, or fill in the box if it is empty.

1. You want to know about the role of the United Nations in world politics.

Type of search:	Author	Keyword	Subject	Title	Series
Enter the words:	United Nations		politics		role

2. You did a subject search for a book about the Gulf Cooperation Council but couldn't find one. What type of search would you try next?

Type of search:	Author	Keyword	Subject	Title	Series
Enter the words:					

Part II: For the research questions below, write a Boolean search by writing the correct search term on the line and the appropriate Boolean operator in the box.

3. You want information about any international alliance besides the ASEAN.

\_\_\_\_\_  \_\_\_\_\_

4. You want to see the charter of either the ASEAN or the GCC,

\_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

5. You wonder if there are any articles about both the GCC and the ASEAN.

\_\_\_\_\_  \_\_\_\_\_

Figure 6.52 Grade 8 Lesson 3 Homework 2



Grade 8 Lesson 4/5	Information Use	
Target indicators	2.1: Determines accuracy, relevance and comprehensiveness. 2.2: distinguishes among fact, point of view and opinion. 2.3: Identifies inaccurate and misleading information. 2.4: Selects appropriate information for the problem or question.	
General objectives	Define and discuss accuracy, relevance and comprehensiveness. Discusses how point of view influences fact and opinion. Stress the importance of accurate and comprehensive information for intelligent decision making.	
Materials	Whiteboard marker Big 6 summary and student characteristics transparencies. Class work: Fact and opinion, accuracy, relevance, comprehensiveness.	
Part 1 10 minutes	Monitor project progress. Big 6 summary transparency. Review location and access. Then introduce information use. <i>Once you have located your source, it is deciding what information is valuable to address the information problem and then extracting that information. It's like collecting shells at the beach. The best way to collect them is to use what is called "Trash and Treasure." When you're looking for shells, you keep the pretty ones, unique ones, special ones. They are worth keeping. But you leave many behind because they might be too plain, broken, or you already have one like them. There are lots of shells on the beach, and information is the same. Some you trash and some you treasure. That's part of information use.</i>	
Part 2 10 minutes	Point of view. Ask students to define point of view. (Example: Travel by car/airplane) Information is the same, it look different from different points of view. View transparency of student characteristics. Ask if it is the same person, why or why not. Add faces and names transparency (Kuwaiti-oriented: Jassim, Fatima and Mishal) (Western-oriented: John, Mary and Tony). Discuss how p.o.v. changes one's opinion.	
	Fact and opinion. Look at list and determine which are facts and which are opinions. <i>Facts don't change. Verifiable. Opinions change according to p.o.v. It is important when you are using information to distinguish between fact and opinion. You can use both, but opinions are not always appropriate. Facts are not always available. Trash and treasure facts and opinions according to the task definition and results expected..</i>	
Part 3 10 minutes	Accuracy. <i>When deciding which information to trash and which to treasure, you should also consider accuracy. Define: exact and correct. Look at list of characteristics. Which are accurate. Why or why not? Revise #s 4, 6, 8, 9 and 10 to be more accurate. Further examples related to accuracy:</i>	
Western-oriented: 1. Germany's population statistics: approximation in specified year. 2. Quote or paraphrase? Depends on accuracy required. Quote when exact words should be repeated, paraphrase when meaning is enough. Why?		Kuwaiti-oriented 1. Kuwait's population statistics: approximation in specified year. 2. Quote or paraphrase? Depends on accuracy required. Ex: Quran should be quoted, hadith more commonly paraphrased. Why?
Part 4 5 minutes	Relevance. Define: related to the subject. View transparency of characteristics. Which are relevant to physical description? To describe personality? Relevance depends on task definition. Trash irrelevant, treasure relevant. Say bus driver riddle as example.	
Part 5 5 minutes	Comprehensiveness. Define: complete. View characteristics transparency. Is description of (Jassim/John) comprehensive? Why or why not? Depends on task definition: complexity of topic, research question, product expected.	
Part 6 Remaining time	Conclusion and Class work. Review definitions of words. Stress importance of relevant, accurate and comprehensive information for intelligent decision making. Ask why each is important. Remind students that project is due next week. Class work: 1. Fact or opinion? 2. Change inaccurate statements to be more accurate. 3. Check the relevant statements. 4. Determine comprehensiveness of information.	

Figure 6.53 Grade 8 Lesson Plan 4

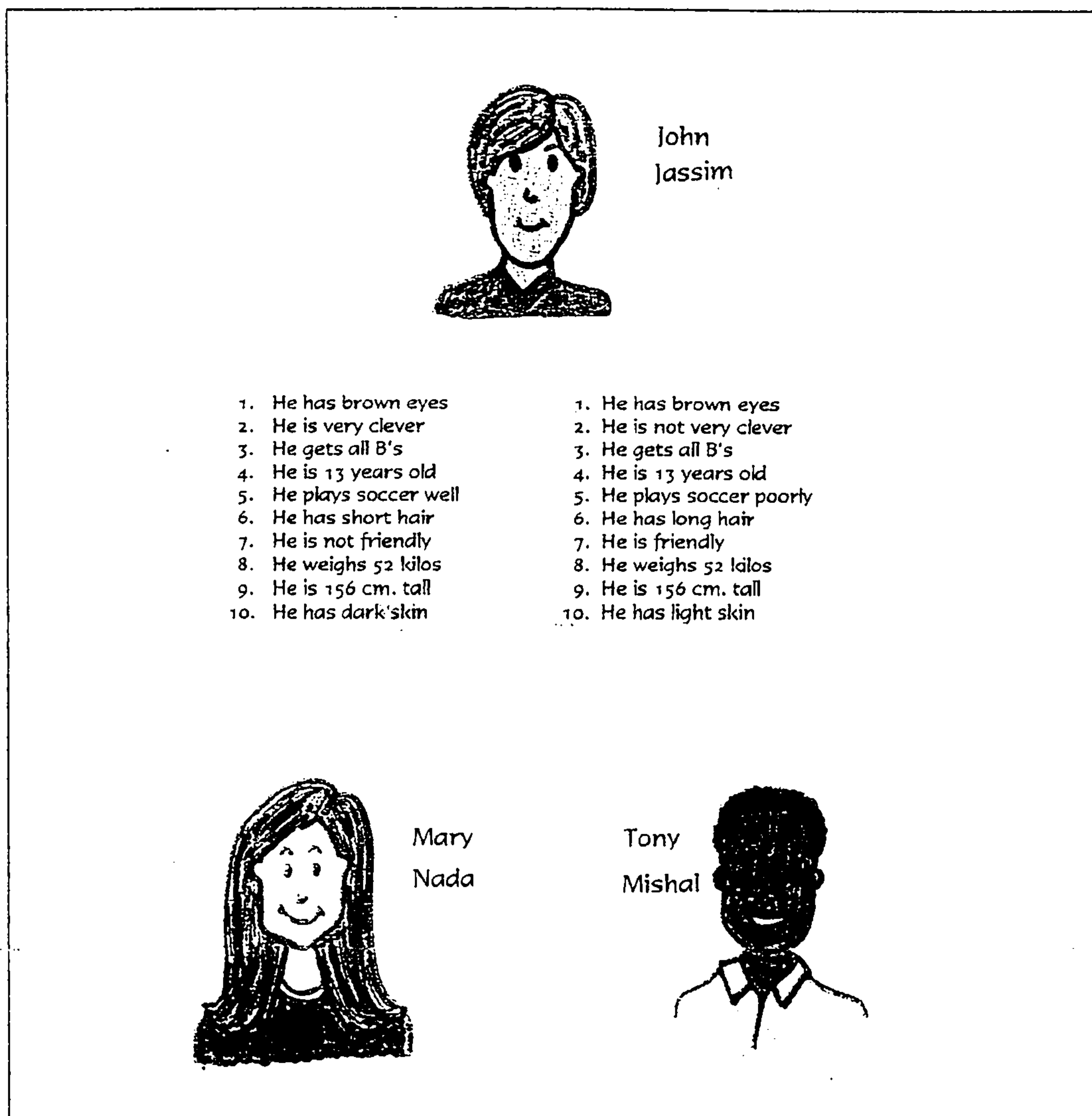


Figure 6.54 Grade 8 Information Use

#### Lesson 4

The transparencies used in this lesson are overlays. The first transparency presented to the students is the two lists of characteristics above centre. When students were asked whether they describe the same person, it was nearly unanimous that they did not. Then an overlay of the images of three students with either Anglo names or Arab names was placed over the two lists, depending on the groups' orientation. It was explained that both lists describe John/Jassim, the first being from Mary/Nada's point of view and the second being from Tony/Mishal's point of view. Other than the substitution of names, the lessons for the two groups are essentially identical.

Name \_\_\_\_\_

### Information Use

Provide a brief definition (in your own words) for the words below:

1. point of view:
2. fact:
3. opinion:
4. quote:
5. paraphrase:

Information problem: Your teacher wants you to learn about the EU.

Task definition: You asked the teacher exactly what the task is and she said, "Tell me what EU means and then tell me five facts about it."

Information Use: During your searches, you learned the following:

- EU stands for "European Union."
- The EU was established in 1993.
- The EU originally had 12 members: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the United Kingdom.
- In 1995, Austria, Finland and Sweden joined the EU.
- The EU aims for peace and cooperation among European states.

6. Are these facts relevant according to the task definition? \_\_\_\_ yes \_\_\_\_ no
7. Are they comprehensive according to the task definition? \_\_\_\_ yes \_\_\_\_ no
8. Which statement below is more accurate?

\_\_\_\_ The EU was established in 1993.  
\_\_\_\_ The EU was established on November 1, 1993.

9. Which statement below is more accurate?

\_\_\_\_ In 1995, Austria, Finland and Sweden joined the original 12 members.  
\_\_\_\_ In 1995, three countries joined the original 12 members.

10. How many more facts about the EU would you need for your list to be comprehensive according to the task definition?

**Figure 6.55 Grade 8 Lesson 4 Homework**



Grade 8 Lesson 5/5	<b>Synthesis: Organisation, Presentation and Evaluation</b>	
Target indicators	3.1: Organises information for practical application. 3.4: Produces and communicates information and ideas in appropriate formats.	
General objectives	Define and discuss alternative ways to organise information. Define and discuss alternative ways to present information. Define and discuss evaluation.	
Materials	Big 6 summary transparency, transparencies of examples.	
Part 1 5 minutes	Students hand in projects. Big 6 summary transparency. Review information use. Then introduce synthesis. <i>Once you have all the information you need to solve the information problem, you will repackage the information into new or different formats according to the task as defined. Synthesis includes organising and presenting info.</i>	
Part 2 15 minutes	Organisation. Define: <i>arranged in an orderly way</i> . Examples: grocery shopping: from store to kitchen. Discuss organisation in home, school, library. Necessary for research and reports. Define topical, hierarchical, chronological, compare/contrast methods of organisation. Transparency for each example. Discuss each method of organisation.	
Western-oriented:		Kuwaiti-oriented:
1. Topical: concerning topics. Eg: governments		1. Topical: concerning topics. Eg: religions
2. Hierarchical: ranks. Eg: Animal kingdom		2. Hierarchical: ranks. Eg: family tree
3. Chronological: in order of time. Eg: US history		3. Chronological: in order of time: Kuwait history
4. Compare/contrast: ASEAN/GCC unions		4. Compare/contrast: ASEAN/GCC unions
Part 3 15 minutes	View transparency of ingredients. What dishes could you prepare? Then show transparency of pizza, sandwich, salad. Define formats: <i>manner of presentation</i> . <i>Similarly, given an information problem such as the task of showing what you learned of a historic traveller (show transparency of Marco Polo to Western-oriented group and that of Ibn Battuta to Kuwaiti group), what formats are possible?</i> After student feedback, discuss transparencies(T).	
Western-oriented: Biography of Marco Polo		Kuwaiti-oriented: Biography of Ibn Battuta
1. Written: report (T), journal (T), letter		5. Written: report (T), journal (T), letter
2. Speech: components of speech (T)		6. Speech: components of speech (T)
3. Visual: poster/bulletin board (T), timeline (T)		7. Visual: poster/bulletin board (T), timeline (T)
4. Multimedia: combination of above		8. Multimedia: combination of above
Part 4 10 minutes	Combining different types of organisation and formats results in different products. Discuss examples below; remind students that research is needed for all scenarios.	
Western-oriented: air pollution (possible scenarios)		Kuwaiti-oriented: Kuwait's oilwell fires (possible scenarios)
1. chronological organisation + visual format: major developments in a timeline		1. chronological organisation + visual format: major developments in a timeline
2. hierarchical organisation + visual: map of pollution concentrations		2. hierarchical organisation + visual: map of largest or longest fires
3. chronological organisation + written format: journal of elderly person's impressions		3. chronological organisation + written format: journal of fire-fighter's impressions
4. topical organisation + written format: research paper about related organisations		4. topical organisation + written format: research paper about various teams' efforts
Part 5 Remaining time	Evaluation: Often ignored by student. <i>Was the information problem solved? Does it meet criteria for success? Was the process efficient? Would I do it differently?</i> Students discuss the evaluation of their projects.	

**Figure 6.56 Grade 8 Lesson Plan 5**

Major Religions	Types of Government
Judaism	Monarchy
Christianity	Dictatorship
Islam	Democracy
Buddhism	Theocracy
Confucianism	Aristocracy
Atheism	Anarchism
Hinduism	Communism

**Figure 6.57 Grade 8 Topical Organisation**

US History	Kuwait's History
1492-1763 New World settled	1672 Kuwait town established
1763-1789 The USA wins independence	1752 Sabah Bin Jaber elected as first ruler
1789-1850 Growth of American democracy	1760 Kuwait Wall is built
1789-1850 The nation's westward advance	1886 First Kuwaiti currency
1850-1877 The nation divides and reunites	1911 First school in Kuwait
1877-1914 Building an industrial nation	1922 First public library in Kuwait
1914-1929 WWI and its results	1938 Oil discovered in Burgan oilfield
1929-1945 Worldwide depression and war	1961 Kuwait's independence
1958-present A nation in the space age	1981 Kuwait joins the GCC
	1990 Iraq invades Kuwait
	1991 Liberation from Iraq

**Figure 6.58 Grade 8 Chronological Organisation**

## Lesson 5

The first part of Lesson 5 is about organisation of information, and four types were discussed, each with a transparency. The first set of lists above represents topical organisation. "Types of Government" was presented to students in the Western-oriented group and "Major Religions" was presented to students in the Kuwaiti-oriented group. The second set of lists represents chronological organisation. Obviously, "US History" was presented to students in the Western-oriented group and "Kuwait's History" was presented to students in the Kuwaiti-oriented group.

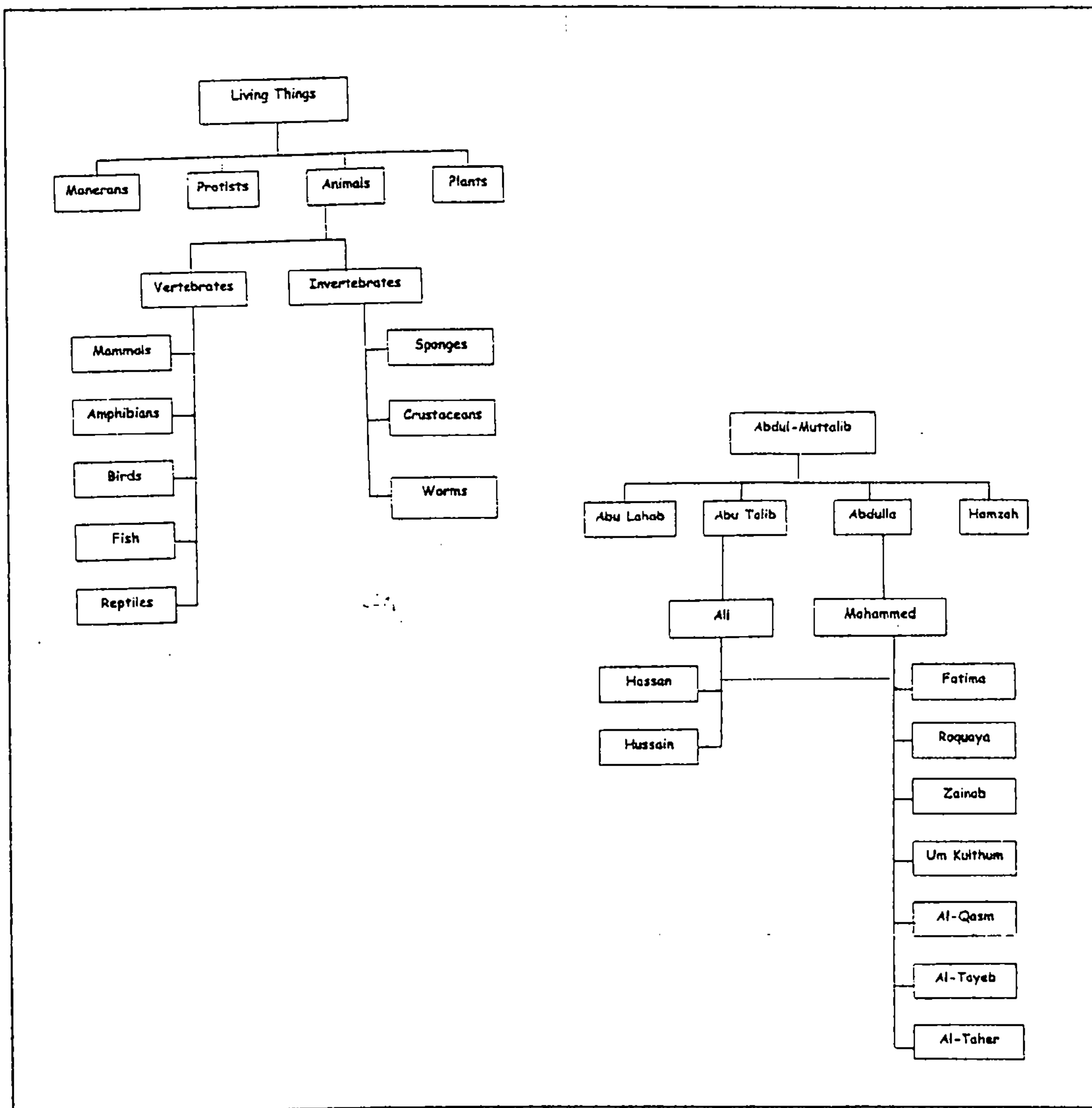


Figure 6.59 Grade 8 Hierarchical Organisation

## Lesson 5

The two diagrams above represent the hierarchical method of organisation. The diagram on the left was presented as a transparency and used during Western-oriented instruction. The diagram on the right was used during the Kuwaiti-oriented instruction; it is part of the Prophet Mohammed's family tree. As with all the pairs of examples used during the comparative instruction, care was taken to ensure that students had approximately the same level of background or familiarity with the examples so that one group would not have an advantage over the other by understanding the topic more thoroughly.



Comparing and Contrasting the  
ASEAN and the GCC

ASEAN	GCC
8 member countries	6 member countries
Southeast Asia	Arabian Peninsula
Formed to accelerate economic growth and peace and stability in the region	Formed to promote solidarity and economic, political and social cooperation
Established during war	Established during peace
Major role in peace-keeping	Major role in oil economics

**Figure 6.60 Grade 8 Compare-Contrast Organisation**

### Lesson 5

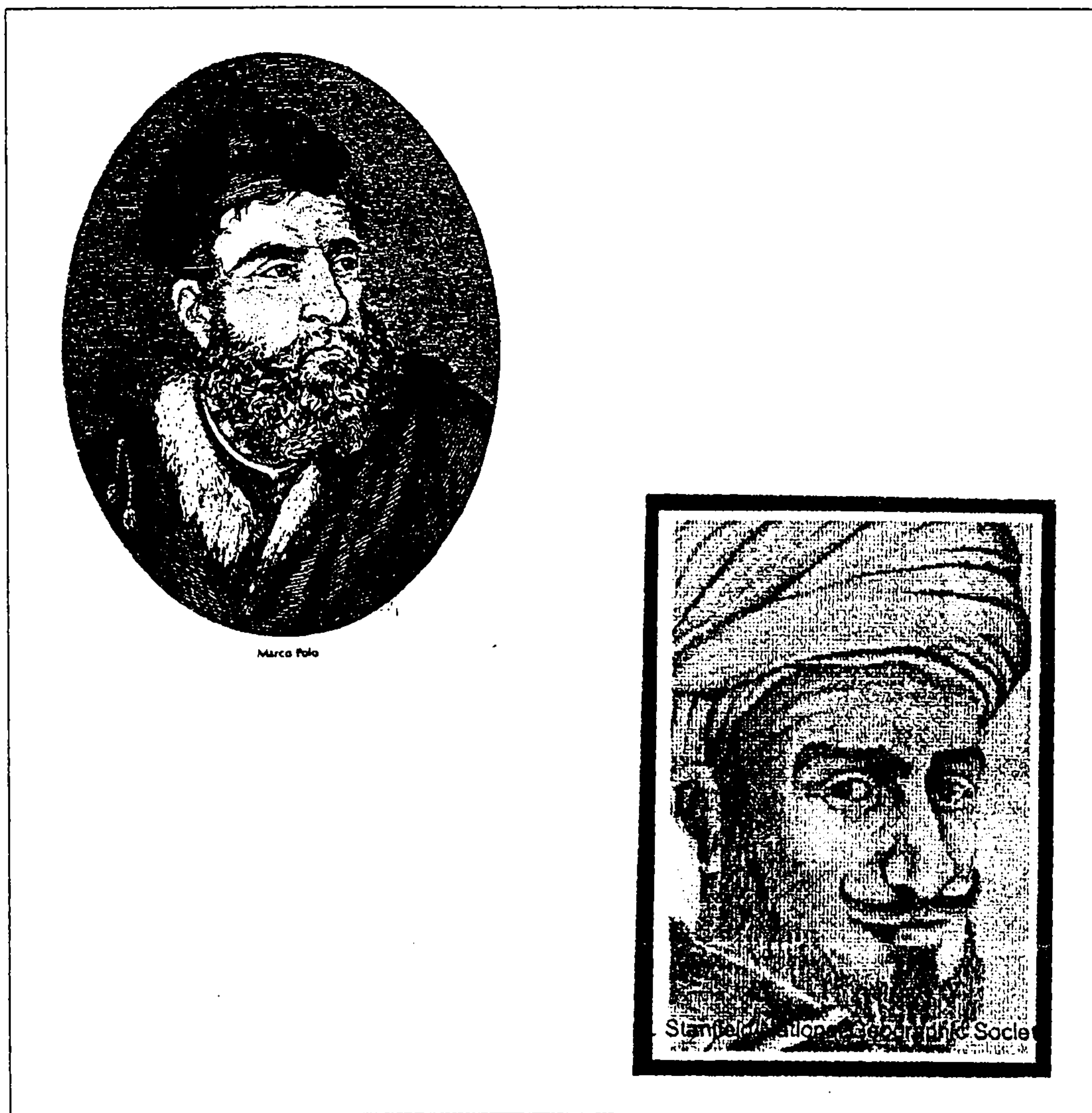
The final example of organisation related to the students' term assignment. By the time this compare/contrast method of organisation was presented in class as a transparency and discussed, the students had turned in their projects. Either ASEAN or GCC was highly relevant to the students at that time based on the knowledge gained through completing the assignment.



Figure 6.61 Grade 8 Information Formats

## Lesson 5

The second part of Lesson 5 was about presenting information in various formats. The researcher presented the transparency on the left and asked students what dish could be prepared with the various ingredients. After discussion, the transparency on the right was presented to demonstrate that various dishes could be prepared with the same ingredients. This analogy introduced the topic of information formats.



**Figure 6.62 Grade 8 Historic Travellers**

### **Lesson 5**

All of the information formats discussed in the second part of Lesson 5 were related to the travels of either Marco Polo or Ibn Battuta. To give the students a mental picture of the traveller that corresponded to their group orientation, the portrait of Marco Polo was presented to the students in the Western-oriented group and that of Ibn Battuta was presented to students in the Kuwaiti-oriented group.<sup>18</sup> Students were asked to imagine that they had collected information on the respective traveller and that they were now going to consider how the information could be presented.



<u>The Travels of Marco Polo</u>	
I. Introduction	
II. Biodata	
I. Full name	
II. Birthplace and date	
III. Death	
III. Travels	
I. Palestine	
II. Turkey	
III. Afghanistan	
IV. China	
V. Persia	
VI. Italy	
VII. Croatia	
IV. Major achievements	
I. "The Book of Ser Marco Polo"	
II. Government official	
V. Conclusion	
	<u>The Travels of Ibn Battuta</u>
	I. Introduction
	II. Biodata
	I. Full name
	II. Birthplace and date
	III. Death
	III. Travels
	I. Cairo
	II. Mecca
	III. Delhi
	IV. Calicut
	V. Ceylon
	VI. China
	VII. Morocco
	IV. Major achievements
	I. "Rihla" (Travels) book
	II. Judge in Morocco
	V. Conclusion

**Figure 6.63 Grade 8 Written or Spoken Format**

## Lesson 5

Continuing the topic of the presentation of information, the outlines above were presented as transparencies to suggest an organisational structure for a written report or a speech. "The Travels of Marco Polo" was presented to students in the Western-oriented group and "The Travels of Ibn Battuta" was presented to students in the Kuwaiti-oriented group.

<p>March 15, 1264</p> <p>You must know that for three months in the year, December, January, and February, the Great Khan lives in the capital city of Cathay, whose name is Khan-balik. In this city he has his great palace, which I will now describe to you.</p> <p>The palace is completely surrounded by a square wall, each side being a mile in length so that the whole circuit is four miles. It is a very thick wall and fully ten paces in height. It is all whitewashed and battlemented. At each corner of this wall stands a large palace of great beauty and splendour, in which the Great Khan keeps his military stores. In the middle of each side is another palace resembling the corner palaces, so that round the whole circuit of the walls there are eight palaces, all serving as arsenals. Each is reserved for a particular type of munition. Thus, one contains saddles, bridles, stirrups, and other items of a horse's harness. In another are bows, bow-strings, quivers, arrows, and other requisites of archery. In a third are cuirasses, corselets, and other armour of boiled leather. And so with the rest.</p>	<p>April 6, 1352 I spoke to my father about my plan to make pilgrimage to Mecca and he gave his permission. My family is not so rich so I will have to travel on foot. It will take over a year to reach Mecca.</p> <p>April 8, 1352 I left home with a little money and a bag of clothes. On the way to Tunis I met a group of people and accepted an invitation to join them. I was fortunate enough to ride on one of their camels, so I arrived in Tunis sooner than I expected.</p> <p>April 15, 1352 In Tunis I located another caravan going to Mecca so I joined them. We covered about 30 kilometers a day. We stayed in Alexandria a few days to rest and purchase supplies for the long trip across the desert.</p> <p>May 1, 1352 We have almost reached Mecca. On the way we stopped in Cairo, Jerusalem, Damascus and Medina. It has been a long trip and I suffered severe illness in Damascus. Sheikh Sakhawi took me to his home and cared for me until I recovered enough to resume the journey south.</p>
---	--

Figure 6.64 Grade 8 Journal Format

## Lesson 5

The two examples above are journal entries and were presented to students as an example of a format of written presentation. The text on the left is an excerpt from Marco Polo's journal <sup>19</sup> and the text on the right is a fictional account of the travels of Ibn Battuta.

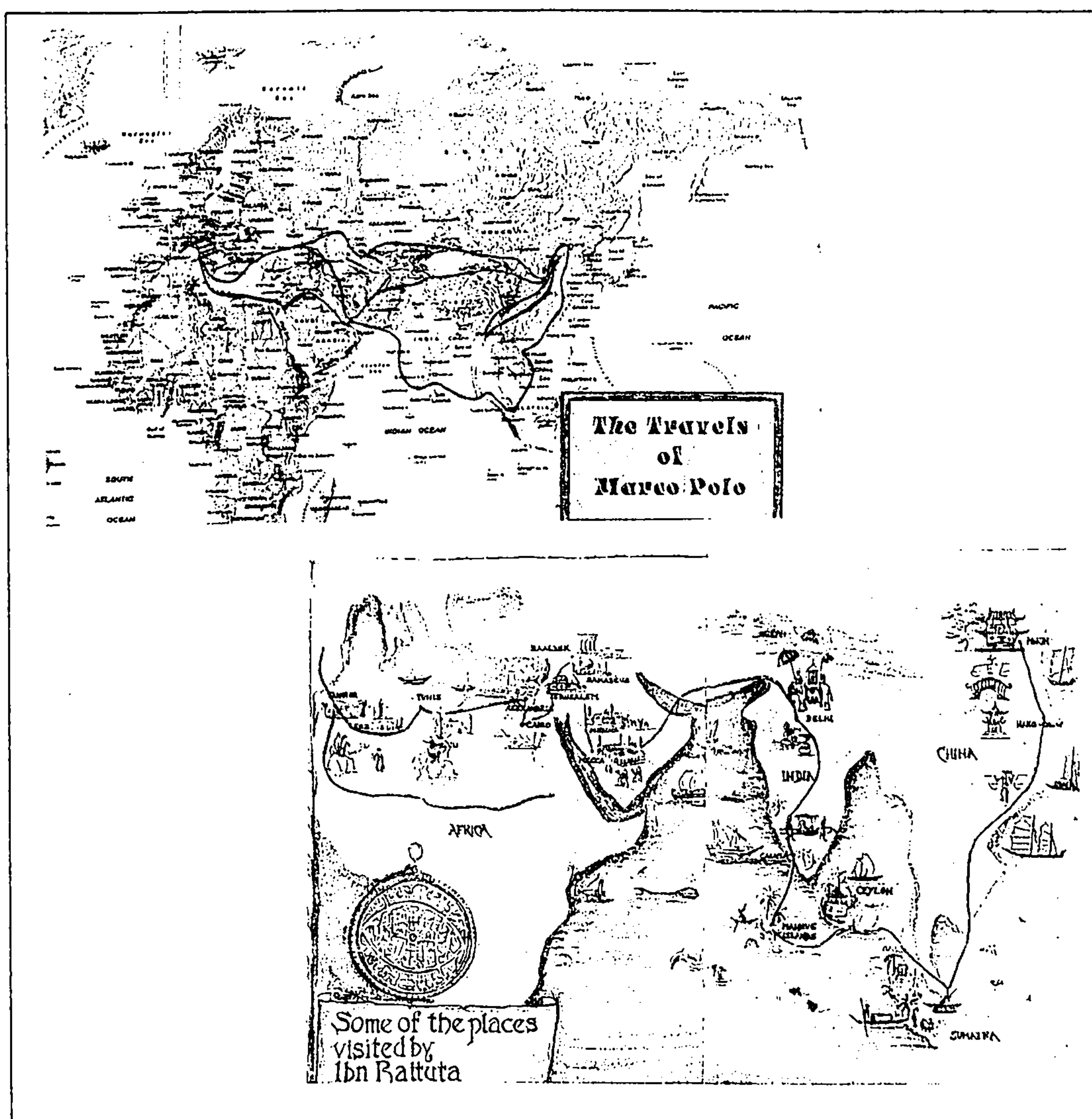


Figure 6.65 Grade 8 Visual Format

## Lesson 5

The maps above were presented to students as transparencies as an example of a visual presentation of information suitable for a poster or bulletin board about the traveller in question.<sup>20</sup> Students were reminded that information can be presented in many different ways, and that the format chosen should be suitable for the amount of information to be communicated, the audience and other requirements of the information problem solving process.



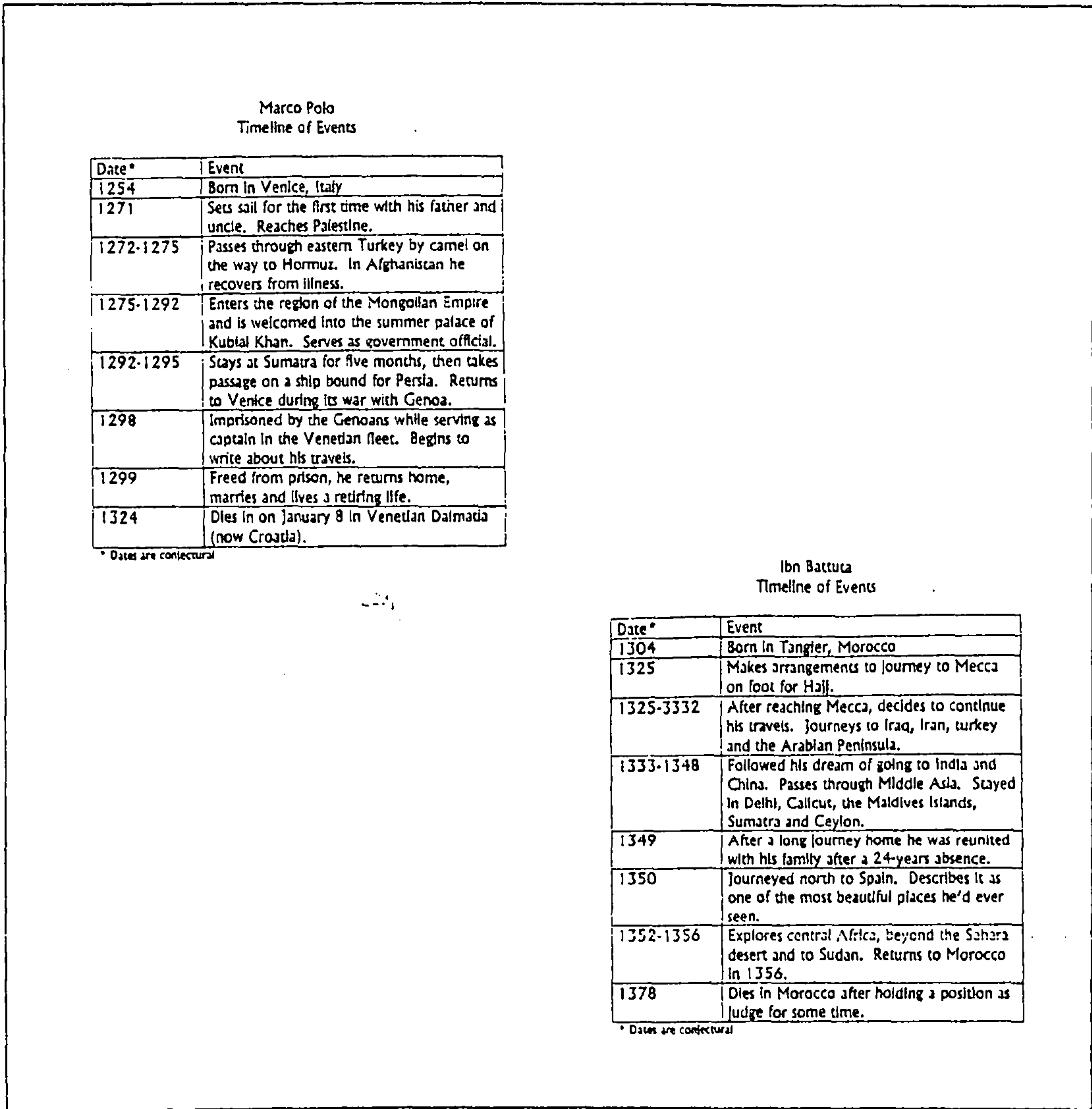


Figure 6.66 Grade 8 Timeline

Lesson 5

The final example of information formats presented via transparency was a timeline. The timeline about Marco Polo’s travels was summarised from a table featured in *Encarta 99 Encyclopedia* on CD.<sup>21</sup> In order to present a similar timeline about the travels of Ibn Battuta, the researcher formulated a table based on the children’s’ book, *Ibn Battuta: South of the Sahara*.<sup>22</sup>

## Assessment Tools

Assessment tools were created to compare the effectiveness of the Western-oriented and Kuwaiti-oriented approaches to instruction. With them, the researcher sought to measure:

- Achievement of information literacy as defined by the AASL and AECT and as taught during the course.
- Understanding of the Big Six information problem solving strategy as taught during the course.
- Attitudes toward information literacy instruction at its completion.

Three assessment tools were designed to measure student achievement and attitudes. The first was a test of information literacy proficiency. The achievement of basic information literacy as defined in the 1998 Information Literacy Standards was measured with students' responses to an information problem solving scenario. To ensure familiarity with the topic and the vocabulary presented in the research scenario, the researcher studied the curricula of third- and seventh-grade students of the same school to determine what subject matter would have been recently taught. It was determined that an information problem related to the animal kingdom would be appropriate for fourth-grade students, since that subject was covered extensively in the third-grade science curriculum. Similarly, eighth grade students studies several ancient civilisations during their seventh-grade social studies class; it was chosen as an appropriate topic for the information problem solving scenario. The two tests are presented in the following pages.

Name \_\_\_\_\_

## The Science Project

**Instructions:**

Read the following questions carefully and answer them in the spaces provided.

If there are words you don't understand, circle the words.

1. Imagine that your science teacher would like you to make a poster about animals. You have decided that you will present a variety of 100 different animals on your poster, but you want to do it in an organized way. In the spaces below, describe two different ways you could arrange the animals on the poster.


Now imagine that your science teacher wants you to make a poster only about desert animals. It should include five facts about each of five different animals (25 facts total). With this assignment in mind, answer all of the following questions.

2. Can you make the poster with the knowledge that you already have about desert animals?

\_\_\_\_\_ yes      \_\_\_\_\_ probably yes      \_\_\_\_\_ probably not      \_\_\_\_\_ no

3. Would you need to get more information to make the poster correctly?

\_\_\_\_\_ yes      \_\_\_\_\_ probably yes      \_\_\_\_\_ probably not      \_\_\_\_\_ no



4. In the space below, list up to three questions that will help you find some facts about animals. (You might ask yourself, "What do I need to know?")

5. To find information for your poster, you could use library books about desert animals. List up to five other resources you could use to find facts about animals.

6. You found a library book entitled "Desert Life" and you only want information about camels. Put a check beside the ideas below that might help you quickly find the information you need.

- ☐ look at the table of contents
- ☐ look on the title page
- ☐ read the book until you find information on camels
- ☐ look in the index

7. You want to find information about camels using the library catalog. From the ideas below, choose the one best way to find such a book.

- ☐ Type the word "camels" in a subject search.
- ☐ Type the word "desert" in a subject search.
- ☐ Type the word "camels" in a title search.
- ☐ Type the word "desert" in a title search.

8. You found some information about animals in a non-fiction book. Put a check beside the facts that are useful for your poster about desert animals.

- ☐ Mammals are animals that nurse their young on milk.
- ☐ Most desert animals have small bodies.
- ☐ Desert animals search for food after sunset.
- ☐ The coyote, kangaroo rat, gecko and bat live in the desert.
- ☐ The world's largest animals live on the grasslands.
- ☐ Amphibians live both in water and on land.
- ☐ Bats live everywhere except very cold places.
- ☐ Most desert animals can live without water for several days.
- ☐ There are about 1 million kinds of animals.
- ☐ To defend themselves, some animals play dead.

9. Look at each set of facts below. Then check the one that you would use for your poster so it will be more accurate.

- ☐ Fennecs are the smallest of all foxes.
- ☐ Fennecs are only about 45 centimeters long.

- ☐ The large ears of some desert animals help protect them and keep them cool.
- ☐ The large ears of some desert animals serve many purposes.

10. Look at each set of facts below. Then check the one that you would use for your poster so that it will be more complete.

- ☐ Desert predators include lizards, snakes and foxes, and herbivores include antelope, camels and insects.
- ☐ There are both predators and herbivores in the desert.

- ☐ A camel does not store water in its stomach.
- ☐ A camel stores water in body tissues, including the fat in its hump.

11. Choose the correct definition for the words on the left.

- |  |                              |
|--|------------------------------|
| <input type="checkbox"/> accurate      | a. complete                  |
| <input type="checkbox"/> relevant      | b. exact and correct         |
| <input type="checkbox"/> comprehensive | c. the source of information |
|  | d. related to the subject    |
|  | e. neat and tidy             |

12. Your teacher asked for five facts for each animal. For the gecko, you found the following information: It has scales. Its feet have claws. Its eyelids are transparent. Its long tongue is used to remove dust from the eyes.

- |   |                              |                             |
|---|------------------------------|-----------------------------|
| a. Is the information you found relevant for your poster? | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| b. Is the information you found accurate for your poster? | <input type="checkbox"/> yes | <input type="checkbox"/> no |
| c. Is the information you found comprehensive?            | <input type="checkbox"/> yes | <input type="checkbox"/> no |

13. According to the teacher's instructions, you must use facts for the poster. For each sentence below, decide if it is a fact or opinion. Then beside each sentence write:

F for fact  
O for opinion

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | It is hard for desert animals to survive.             |
| <input type="checkbox"/> | Lizards, like other reptiles, are cold-blooded.       |
| <input type="checkbox"/> | The camel is the most interesting desert animal.      |
| <input type="checkbox"/> | There is little life in the desert.                   |
| <input type="checkbox"/> | Most desert mammals stay in the shade during the day. |

14. If your teacher would let you decide how to show what you learned about desert animals (instead of making a poster), what different formats could you use? Name up to five different formats.



Name \_\_\_\_\_

## Ancient Civilizations

**Instructions:**

Read the following questions carefully and answer them in the spaces provided.

If there are words you don't understand, circle the words.

There have been many great civilizations throughout history. Imagine that for social studies class, your teacher wants you to make a poster about ancient civilizations. Your poster should include five facts about each of ten ancient civilizations (50 facts total). With this assignment in mind, answer all of the following questions.

1. In the spaces below, describe three methods of organization you could use for your poster.


2. Can you complete the poster with the knowledge that you already have about ancient civilizations?

\_\_\_\_\_ yes    \_\_\_\_\_ probably yes    \_\_\_\_\_ probably not    \_\_\_\_\_ no

3. Would you need to get more information to make the poster correctly?

\_\_\_\_\_ yes    \_\_\_\_\_ probably yes    \_\_\_\_\_ probably not    \_\_\_\_\_ no

4. In the space below, list up to three questions that will help you define the information problem to be solved.

5. To find information for your poster, you could use library books about ancient civilizations. List up to five other resources you could use to find information for your poster.

6. You found a library book entitled "The Ancient World" and you only want information about Greece. Put a check beside the ideas below that might help you quickly find the information you need.

- \_\_\_\_\_ look at the table of contents
- \_\_\_\_\_ look on the title page
- \_\_\_\_\_ read the book until you find information about ancient Greece
- \_\_\_\_\_ look in the index

7. You want to find information about the Mayas, who lived in Central America. From the ideas below, choose the one best way to find such information using the library catalog.

- ☐ Type the word "Mayas" in a subject search.
- ☐ Type the words "Central America" in a subject search.
- ☐ Type the word "Mayas" in a title search.
- ☐ Type the words "Central America" in a title search.

8. While you were looking for information about ancient Greece, you found a non-fiction book entitled "The Ancient World." Put a check beside the facts that provide useful information about the ancient Greek civilization for your poster.

- ☐ Great ancient civilizations had well-developed forms of government, religion, writing and learning.
- ☐ Modern Greece covers an area of about 132,000 square kilometers.
- ☐ The Acropolis is a landmark in Greece that has survived through the centuries to our time.
- ☐ Social structures were important in ancient civilizations.
- ☐ Greece has strong ties with Germany, England, France, Japan and Italy.
- ☐ Greeks today call themselves "Hellenes."
- ☐ Corn, grapes and olives were cultivated by the ancient Greeks.
- ☐ Shoes, cigarettes and clothing are manufactured in Greece.
- ☐ Greece became a democratic republic in 1974.
- ☐ Athens and Sparta were the two largest cities in ancient Greece.

9. Look at the each set of facts below. Then check the one that you would use for your paper so it will be more accurate.

- ☐ Silk has long been used in China to weave cloth and ribbon.
- ☐ Silk has been produced throughout the Huang He Valley since 2700 BC.
- ☐ There were as many as 5000 pictographs in the ancient Chinese language.
- ☐ Only the wealthy in Ancient China had the time to learn to read and write.

10. Look at each pair of facts below. Then check the one that you would use for your poster so that it will be more complete.

- ☐ Around 2000 BC, people living in Thailand began making bronze objects.
- ☐ Around 2000 BC, people living in Thailand made tools, weapons, ornaments and drums out of bronze
- ☐ The Nile River was important to the development of the Egyptian civilization in northern Africa.
- ☐ The Nile River not only gave water, it was a means of irrigation and transportation for ancient Egyptians.



11. Choose the correct definition for the words on the left.

- |  |                              |
|--|------------------------------|
| <input type="checkbox"/> accurate      | a. complete                  |
| <input type="checkbox"/> relevant      | b. exact and correct         |
| <input type="checkbox"/> comprehensive | c. the source of information |
|  | d. related to the subject    |
|  | e. neat and tidy             |

12. Your teacher asked for five facts about each civilization on your poster. For Ancient Egypt, you found the following information: Its civilization flourished from before 3400 BC until 30 BC. The king of ancient Egypt, or pharaoh, was regarded as divine. The capital was Memphis. Hieroglyphics is the form of writing that ancient Egyptians used.

- a. Is the information you found relevant for your poster? ☐ yes ☐ no
- b. Is the information you found accurate for your poster? ☐ yes ☐ no
- c. Is the information you found comprehensive? ☐ yes ☐ no

13. According to the teacher's instructions, you must use facts for your poster. For each sentence below, decide if it is a fact or an opinion. Then beside each sentence write:

F for fact  
O for opinion

- ☐ The Aryan culture was based on four main social classes.
- ☐ The Brahmans, or the highest class, were the best people in ancient India.
- ☐ The Aryan civilization is the most fascinating ancient civilization to study.
- ☐ The Aryan people were very civilized.
- ☐ The Buddha, whose name was really Gautama Siddhartha, lived from 560 to about 485 BC in ancient India.

14. If your teacher gave you a choice of formats for presenting what you learned about the ancient civilizations (instead of a poster), what different formats could you use? Name up to five different formats.

The second assessment tool was a test designed to determine the students' level of understanding of the Big Six information problem solving strategy used throughout instruction. Fourth grade students were required to match the Big Six step with its definition and to order the steps in the correct sequence. Eighth grade students were given a hypothetical information problem and were required to describe with a sentence or two how they would apply each step of the Big Six strategy. A correct answer would include any statement that relates to the relevant step in the information problem solving strategy. The tests used to measure the students' understanding of the Big Six strategy are presented in the following pages.

Name \_\_\_\_\_

## The Big Six Test

Match the Big Six step with the definitions.

- |                                      |  |
|--------------------------------------|--|
| _____ Synthesis                      | a. ask what needs to be done   |
| _____ Location and Access            | b. find the information you need                                     |
| _____ Task Definition                | c. put it together in a meaningful way                               |
| _____ Evaluation                     | d. make a plan to find information                                   |
| _____ Information Seeking Strategies | e. see if you did the job right                                      |
| _____ Information Use                | f. treasure information that is accurate, relevant and comprehensive |

Put the Big Six steps in the correct order by putting a "1" by the first step, a "2" by the second step, and so on.

- \_\_\_\_\_ Synthesis
- \_\_\_\_\_ Location and Access
- \_\_\_\_\_ Task Definition
- \_\_\_\_\_ Evaluation
- \_\_\_\_\_ Information Seeking Strategies
- \_\_\_\_\_ Information Use







Name \_\_\_\_\_

Imagine that your teacher gave you the following assignment: "Learn about the United Nations and present what you learn to the class." You decide to use the Big Six information problem solving strategy. For each of the six steps listed below, describe in a sentence or two what you would do to complete the assignment.

# 1	Task Definition
# 2	Information Seeking Strategies
# 3	Location and Access
# 4	Use of Information
# 5	Synthesis
# 6	Evaluation

The third assessment tool was a questionnaire designed to measure students' attitudes toward instruction for information literacy, the Big Six information problem solving strategy, the homework required for the course, the examples used to facilitate learning, and the students' level of confidence in solving information problems. The questionnaires featured a Likert scale, which provided an established method of assessment. For each statement, eighth grade students were required to check one of five responses from "strongly agree" to "strongly disagree," and fourth grade students were required to check one of four facial expressions that matched their feelings. The statements listed on the fourth grade questionnaire were simplified versions of those used for the eighth grade students' questionnaire. The two questionnaires are presented in the following pages.

## Information Problem Solving Attitude Test - Grade 4

				
1. The Big Six is useful for solving information problems.				
2. I don't think I can solve information problems.				
3. The Big Six was hard to understand.				
4. Learning how to solve information problems is important.				
5. I did not like learning about information problem solving.				
6. I am better at solving information problems now.				
7. I would like to learn more about information problem solving.				
8. The Big Six is not helpful for solving information problems.				
9. The examples the teacher used were good.				
10. I think I can solve new information problems.				
11. It is not important to learn about information problem solving.				
12. The Big Six is easy to understand.				
13. I liked learning about the Big Six.				
14. The examples the teacher used were boring.				
15. Learning how to solve information problems was fun.				



## Information Problem Solving Attitude Test – Grade 8

Statement	Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree
1. The Big Six helped me understand how to solve information problems.					
2. Information problem solving is an important subject to learn about.					
3. My attitude toward information problems is better than it was before the course.					
4. The homework did not help me develop information problem solving strategies.					
5. The information presented in this quarter was interesting.					
6. I do not feel confident to handle information problems I may face in the future.					
7. My information problem solving abilities have improved since taking the course.					
8. I easily understood the material on information problem solving.					
9. The course did not improve my ability to solve information problems.					
10. The examples the teacher used were interesting.					
11. The project about making a charter was interesting to me.					
12. I would like to know more about information problem solving.					
13. I liked learning about information problem solving.					
14. I did not like the course on information problem solving.					
15. The material on information problem solving was hard to understand.					
16. I learned a good strategy for solving information problems during this course.					
17. The Big Six is not a helpful strategy for solving information problems.					
18. I feel confident handling information problems in the future.					
19. The examples the teacher used were boring.					
20. Information problem solving is an important subject to learn about.					

While class work and homework were given at both grade levels throughout the course, they were not considered by the researcher as a true measure of knowledge and skill since the possibility for group work, sharing information and outside assistance were present. Therefore, class work and homework were marked and returned to the students to facilitate their own learning, but were not considered as a part of the assessment of information literacy or their information problem solving abilities.

## **Conclusion**

As a foundation for the experiment of comparative instruction used to test the value of culturally relevant instruction for information literacy as opposed to that which is more conventional and Western-oriented, the researcher used the most current standards of information literacy and the most widely known process approach to information problem solving. The indicators of information literacy at a basic level and a well-known information problem solving strategy provided the bases for the goals, objectives and content of classroom instruction.

To increase the degree of teaching equivalence between the control and experimental groups, transparencies for overhead projection were used to display examples of information problems, types of information organisation, and so forth. Additionally, every effort was made to ensure that students in both groups had similar familiarity to the examples being used. For example, a very popular lesson plan used to give an overview of the Big Six strategy involves a recipe for banana splits, which are not commonly known in Kuwait. The researcher substituted cheesecake for this example since it is a popular dessert and is offered in many restaurants in Kuwait.

This chapter has explained the foundations of curriculum development, presented detailed lesson plans used for Western-oriented and Kuwaiti-oriented instruction, and presented the assessment tools used to measure student achievement and attitudes. Chapter Seven presents in detail the research methodology used to implement the field research.

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<sup>16</sup> *State of Kuwait: guide to streets*, ref. 10.

<sup>17</sup> *London AZ*, ref. 11.

<sup>18</sup> The portrait of Ibn Battuta was taken from "Ibn Battuta," Microsoft Encarta Encyclopedia Deluxe 99, 1998.

The portrait of Marco Polo was taken from **Greene, Carol**. *Marco Polo: voyager to the Orient*. Chicago: Children's Press, 1987, p. 53.

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<sup>20</sup> The map of Marco Polo's travels was plotted and labeled by the researcher.

The map of Ibn Battuta's travels was taken from **Zayid, Mahmud**. *Ibn Battuta: south of the Sahara*. (English Language Teaching for the Arab World Series.) Oxford: Oxford University Press, 1983.

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## **Chapter Seven**

### **Research Methodology**

#### **Introduction**

The purpose of this study was to investigate the effect of cultural relevance in information literacy instruction for Kuwaiti students. Osborne cited several studies that confirm the general assumption that “it is desirable to teach content that is culturally relevant to students’ previous experiences, that fosters their natal cultural identity, and that empowers them with knowledge and practices to operate successfully in mainstream society.”<sup>1</sup> However, there is little empirical data to support this assumption, especially in the field of information literacy. Howze and Smith studied the effects of multicultural material on black students at Iowa State University’s pre-admission library instruction programme.<sup>2</sup> They reported that multicultural material seems important for students of colour, and suggested a positive effect in the use of multicultural examples. Their study, however, provides insufficient evidence to demonstrate the relationship of information literacy instruction that is culturally relevant to student achievement and attitudes. This study, therefore, investigates this relationship.

#### **Definition of Terms**

With regard to the research methodology, the following terms are used according to these definitions:

*Kuwaiti student.* A student having one or more parents with Kuwaiti citizenship.

*Kuwaiti curriculum.* One of two curricula used to teach information literacy skills and concepts. It reflects Kuwaiti culture with examples that are relevant to Kuwait’s identity as an Arab, Islamic and Gulf country.

*Western curriculum.* One of two curricula used to teach information literacy skills and concepts. It does not reflect Kuwait's culture but rather Western culture, having examples that are typically European or American.

*Pre-test.* A test administered to participating students prior to instruction and based on the three standards of information literacy and the indicators of either basic or proficient levels of proficiency as described in the document *Information Literacy Standards for Student Learning*.<sup>3</sup>

*Post-test.* Identical to the pre-test, this test was administered to students after the conclusion of instruction.

*Achievement score.* This value represents the difference between the pre-test and the post-test scores.

*Final test.* A test administered to participating students after the conclusion of instruction to test their recall of the Big Six™ information problem solving strategy.<sup>4</sup>

## **Purpose of the Study**

The purpose of this study is to investigate the effects of culturally relevant instruction compared with instruction that is not culturally relevant among Kuwaiti school children. For this purpose, research was planned to test the hypothesis that instruction for information literacy that is culturally relevant elicits a higher learning response and more positive attitudes in Kuwaiti youth as opposed to instruction with identical general aims that is not culturally relevant. More specifically, this study aims to test the following hypotheses, stated in null terms:

H<sub>01</sub>: There is no significant difference in the mean achievement scores in information problem solving between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.



H<sub>02</sub>: There is no significant difference in ability to recall the Big Six™ strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.

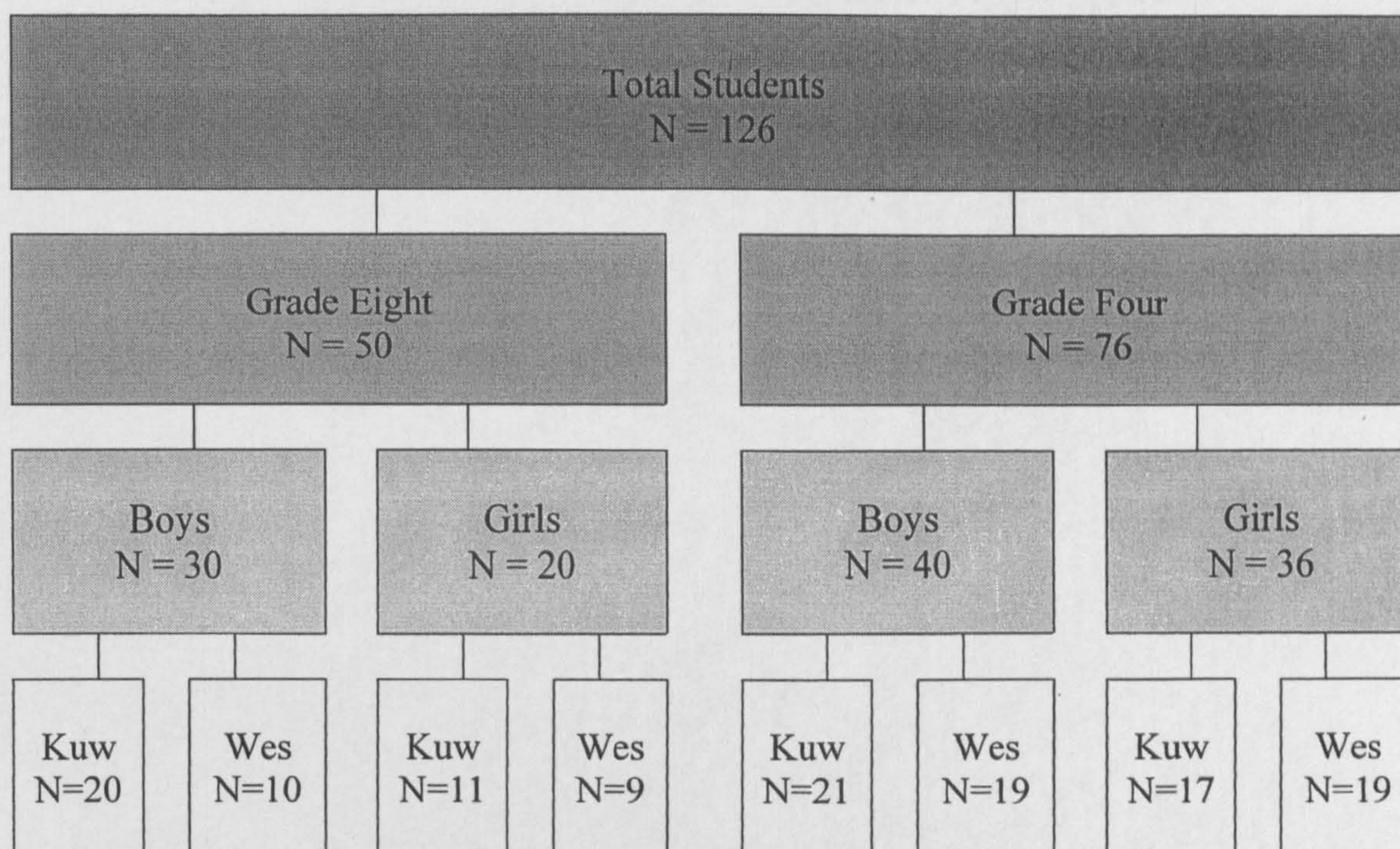
H<sub>03</sub>: There is no significant difference in the attitudes towards information problem solving and the Big Six™ strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.

H<sub>04</sub>: There is no significant difference in the test scores and attitudes between males and females within the same type of instruction.

## **Methodology**

A methodology was planned that could provide the means to quantify and compare learning outcomes achieved through instruction based on the inclusion or exclusion of cultural relevance in the curricula. The design of the study was quasi-experimental and compared learning outcomes between groups of students exposed to different learning conditions. The subjects for the study were fourth and eighth grade students at the American Creativity Academy (ACA) in Kuwait.<sup>5</sup> ACA was chosen as the site of the experiment based on the fact that it has the highest ratio of Kuwaiti students among English-medium schools in Kuwait; they represent approximately 90% of the student body. Eight classes comprising 142 students received information literacy instruction; however, 16 students' test results were disregarded since they did not meet the criteria for Kuwaiti citizenship necessary for participation in the study. The remaining students are represented in Figure 7.1.





**Figure 7.1 Participants in Comparative Instruction**

Each of eight classes represented in the last row of Figure 7.1 met independently for instruction developed and implemented by the researcher beginning September 4, 2000. Eighth grade students received five 55-minute lessons (4.6 hours) and fourth grade students received seven 40-minute lessons (4.7 hours). Furthermore, classes were conducted on a six-day rotation instead of the usual 5-day rotation, resulting in each group of students receiving instruction on different days of the week for the total period of instruction. The schedule of classes for the groups who participated in the study is presented in figure 7.2.



Time	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
7:30-8:25						Gr. 4 boys Kuwaiti-oriented
8:30-9:25	Gr. 8 boys Kuwaiti-oriented			Gr. 4 boys Western-oriented		
9:55-10:50		Gr. 8 girls Kuwaiti-oriented		Gr. 8 girls Western-oriented		Gr. 4 girls Kuwaiti-oriented
10:40-11:35					Gr. 8 boys Western-oriented	
12:35-1:30					Gr. 4 girls Western-oriented	

**Figure 7.2 Schedule of Classes for Instruction**

The design of the experiment allowed for three independent variables: type of instruction (Kuwaiti or Western), grade level (four or eight) and gender. Dependent variables were the pre-test, post-test, final test and attitude questionnaire. Tests were administered one week after the conclusion of instruction.

### Instrumentation

The three standards of information literacy for student learning developed by the AASL and AECT, together with the indicators of either basic or proficient levels of proficiency, as described in the document, *Information Literacy Standards for Student Learning*<sup>6</sup> provided the basis for both instruction and the pre- and post-tests. The three standards, thirteen indicators and corresponding levels of proficiency used for the test instrument are presented in Chapter Six (pages 128-130).

Three tests were used to measure student achievement and attitudes toward the instruction received:



A pre- and post-test designed by the researcher and based on the information literacy document published by the AASL and AECT measured the students' levels of information literacy at the outset of the experiment and the learning achieved at the conclusion of the experiment, providing data to investigate whether the culturally relevant approach resulted in higher learning responses. Both the eighth grade and fourth grade test instruments were comprised of 14 short answer or multiple choice questions about a hypothetical information problem. Eighth grade students were required to answer questions related to the hypothetical task of making a poster about ancient civilisations. Fourth grade students were required to answer questions related to the hypothetical task of making a poster about the animal kingdom. Care was taken to ensure that the subject matter of the test was part of the students' instruction during the year prior to testing. The pre-post-tests are presented in Chapter Six (pages 199-206).

A final test was administered to measure the students' understanding and recall of the Big Six™ information problem-solving strategy that was used as the main vehicle for instruction. This test was not paired with a pre-test since none of the participating students had experience with the Big Six strategy. Eighth grade students were given a hypothetical information problem of finding information about the United Nations. They were then required to describe with a sentence or two how they would apply each step of the Big Six strategy to solve the information problem given. The fourth grade students' final test was comprised of two parts. In the first part, they were asked to match the Big Six step with its definition, and in the second part they were asked to order the steps in the correct sequence. Both the eighth grade and fourth grade final tests are presented in Chapter Six (pages 208-209).

To measure student's attitudes toward information problem solving, the Big Six strategy and classroom instruction, each student was asked to fill a questionnaire by indicating the degree of his agreement to each statement listed. Eighth grade students answered 20 questions according to a five-point scale and fourth grade students answered 15 questions according to a four-point scale. The questionnaires are presented in Chapter Six (pages 211-212).

## **Pilot Study**

To test the feasibility of the pre- and post-test, a pilot study was administered to approximately 90 fourth and eighth grade students at the American Creativity Academy in May 2000. These students did not participate in the actual experiment, but had had the relevant general education as a background to the subject matter presented in the test instrument. The researcher noted comments and questions and recorded the elapsed time for completion. The pilot study gave the researcher insight into the students' comprehension of the instructions and content. Modifications were made to the test instrument based on the results of the pilot study. The original questions and modifications are presented in Appendix 6 and the final version of the pre- and post-test for each grade is presented in Chapter Six (pages 199-206).

## **Scoring Procedures**

Although pre-tests were administered before instruction began, they were not marked until all post-tests had been collected. Names were removed from the tests for anonymity and coded according to student serial numbers. For each pre- and post-test, questions were marked according to an answer key evaluated and approved by two teachers of the relevant subject matter and a school librarian familiar with the Big Six strategy. This answer key and the teachers' statement of approval are presented in Appendix 7. The score sheet used for each pre- and post-test is presented in Figure 7.3.

The final tests for fourth grade students were marked by giving one point for every correct answer in the matching and sequencing tasks related to the Big Six strategy. The final test for the eighth grade students involved a subjective evaluation of the accuracy and completeness of each student's answer. To improve the internal validity of the marking procedure, two independent evaluators with knowledge of the Big Six strategy scored each test according to the score sheet presented in Figure 7.4, and then the mean of the two scores was recorded for the student. The two grades and the mean score for each eighth grade student for the final test are presented in Appendix 8.

1. Number Correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3 (disregard incorrect answers)

2. \_\_\_\_ 0 (y) \_\_\_\_ 1 (py) \_\_\_\_ 2 (pn) \_\_\_\_ 3 (n)

3. \_\_\_\_ 3 (y) \_\_\_\_ 2 (py) \_\_\_\_ 1 (pn) \_\_\_\_ 0 (n)

4. Number Correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3 (disregard incorrect answers)

5. Number Correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3 \_\_\_\_ 4 \_\_\_\_ 5 (disregard incorrect answers)

6. Number correct minus number incorrect = \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2

7. Number correct minus number incorrect = \_\_\_\_ 0 \_\_\_\_ 1

8. Number correct minus number incorrect = \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3 \_\_\_\_ 4 \_\_\_\_ 5

9. Number correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2

10. Number correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2

11. Number correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3

12. Number correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3 Total Score: \_\_\_\_\_

13. Number correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3 \_\_\_\_ 4 \_\_\_\_ 5

14. Number Correct: \_\_\_\_ 0 \_\_\_\_ 1 \_\_\_\_ 2 \_\_\_\_ 3 \_\_\_\_ 4 \_\_\_\_ 5 (disregard incorrect answers)

**Figure 7.3 Score Sheet for Pre- and Post- Tests**

Big Six Step	Score	Points Awarded  0 points = not related 1 point = vaguely related 2 points = partial understanding 3 points = full understanding
1		
2		
3		
4		
5		
6		
Total Score		

**Figure 7.4 Score Sheet for Final Test for Eighth Grade Students**





In addition to the pre-post test on information problem solving and the final test on the Big Six strategy, a questionnaire was designed to measure student attitudes toward information literacy instruction, the Big Six strategy and the material taken



during the course. Eighth grade students responded to twenty statements on a five-point scale and fourth grade students responded to fifteen statements on a four-point scale. Specifically, eighth grade students were instructed to indicate their level of agreement to each statement listed by checking “Strongly Agree,” “Agree,” “Don’t Know,” “Disagree,” or “Strongly Disagree.” Fourth grade students were instructed to indicate their level of agreement to each statement listed by checking a facial expression that matched their feelings. The expressions and their meanings are presented in Figure 7.5. The researcher, before administering the test, explained the expressions and practised with the students by asking their responses to the following questions:

1. I am cold.
2. I like rain.
3. I don’t like P.E. class.

After ascertaining the students’ understanding of the instructions, the researcher administered the questionnaire to the students.

			
Strongly Agree	Agree	Don’t Know	Disagree

**Figure 7.5 Symbols Used to Indicate Level of Agreement in Fourth Grade Questionnaire**

### Statistical Analysis

The methodology of this study provided the means to quantify and compare achievement and attitudes among Kuwaiti youth exposed to different learning conditions. To test achievement between independent groups of students, each student took a pre- and post-test, the difference of which resulted in his achievement score, and a final test, which measured his recall of the Big Six strategy. To measure the attitudes of students exposed to different learning conditions, a questionnaire was

administered at the conclusion of instruction. The students' responses on the tests and questionnaires provided data to test the hypotheses put forth in this study.

The criterion of significance to test the hypotheses was set at 5% ( $p \leq 0.05$ ), indicating that when  $p$  values are less than or equal to 0.05, the probability of obtaining a mean beyond the critical value is less than or equal to 0.05 when the null hypothesis is true. This will lead to the rejection of the null hypotheses. The Statistics Package for Social Sciences (SPSS version 10.0) for Windows was used to compute the data generated from the independent groups that participated in the study. The primary test utilised in the study was the independent samples  $t$  test, which is used to test for a statistically significant difference between means of two populations when two samples of subjects provide scores on a measure (e.g., the post-test). The assumptions that underlie the independent samples  $t$  test include normality of the score distributions and homogeneity of variances, i.e., the variations of each population distribution are similar.<sup>7</sup> To test for normal distribution, the One-Sample Kolmogorov-Smirnov test was applied to the pre-test, post-test and final test; results are presented below in Table 7.1.

**Table 7.1 The One-Sample Kolmogorov-Smirnov Test for Normality**

		Pre-Test	Post-Test	Final
N		117	125	126
Normal Parameters	Mean	12.86	21.91	4.143
	Std. Deviation	8.74	8.2	2.778
Most Extreme Differences	Absolute	0.116	0.068	0.101
	Positive	0.116	0.068	0.101
	Negative	-0.071	-0.054	-0.068
Kolmogorov-Smirnov Z		1.250	0.765	1.134
Significance (2-tailed)		0.088	0.602	0.153

Since the value of each column is greater than 0.05, the assumptions of normality of distribution are satisfied in the pre-test scores, post-test scores and final test scores. This confirmation of normality made it possible to use the independent samples  $t$  test for equality of means with increased confidence.

To test the assumption of homogeneity of variance among the independent groups that participated in the study, Levene's Test for Equality of Variances was performed before each group combination was tested with the independent samples  $t$  test. When  $p \geq 0.05$ , equality of variance can be assumed for the  $t$  test and the statistical significance that reflected the equal variances was used. Likewise, when  $p < 0.05$ , equality of variance cannot be assumed and the statistical significance for the  $t$  test that reflected unequal variances was used.

In addition to the Kolmogorov-Smirnov One-Sample Test, used to test normality of distribution, and Levene's homogeneity of variance test, an Analysis of Variance (ANOVA) was used to analyse the variance for the dependent variables both individually and in groups. ANOVA is used to test the hypothesis that several group means are equal in the population by comparing the sample variance estimated from the group means to that estimated within the groups. The results of the ANOVA provided general indications of variances among the independent variables, i.e., grade (eighth or fourth), type of instruction (Kuwaiti- or Western-oriented) and gender. Finally, to provide a more in-depth analysis of variance between populations, independent samples  $t$  tests for equality of means were computed for various pairs of independent groups. These results are presented and discussed in the following chapter.

The  $t$  tests and the ANOVA, known as parametric tests, were used to measure the significance between the responses of students on the pre-, post- and final tests. Parametric tests are suitable to either interval or ratio scales of measurement; however, these tests are not suitable for frequency counts such as that generated with the attitude questionnaires. Therefore, a nonparametric test was necessary to measure the differences in attitudes between groups as indicated in the respective questionnaires. The Chi square test ( $\chi^2$ ) was used to compute the statistical



significance levels for differences between student attitudes. A significance level of 0.05 was retained for this portion of the analysis.

## **Conclusion**

This chapter described the design of the study, including its hypotheses, instrumentation, scoring procedures and data analyses procedures. To summarise, the following procedure was used in the data analysis:

1. A priori level of significance was set at  $p \leq 0.05$  to test the hypotheses.
2. The Kolmogorov-Smirnov One-Sample Test was used to measure the normality of distribution among samples, which is one of the assumptions of the independent samples *t* test. The results confirmed normality of distribution.
3. The Analysis of Variance (ANOVA) test was used to analyse the variance for the dependent variables both individually and in groups.
4. Levene's Test for Equality of Variances was performed prior to each independent samples *t* test so that the statistical significance value that accurately reflects its variance status would be reported.
5. The independent samples *t* test was used to test for a statistically significant difference between the means of test scores among paired groups.
6. The Chi-square test was used to analyse the frequency counts generated from the questionnaires designed to measure student attitudes toward the instruction.

Chapter Eight presents the data analysis and reports the findings associated with each test.

## References

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<sup>1</sup>Osborne, A. Barry. Practice into theory into practice: culturally relevant pedagogy for students we have marginalized and normalized. *Anthropology and Education Quarterly*, 1996, 27, 292-293.

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<sup>4</sup>Eisenberg, Michael B and Robert E. Berkowitz. *Information Problem-Solving: The Big Six Skills Approach to Library and Information Skills Instruction*, 1990.

<sup>5</sup>The correspondence between the researcher and the American Creativity Academy is presented in Appendix 5.

<sup>6</sup>AASL and AECT, ref. 3.

<sup>7</sup>Grimm, Laurence G. *Statistical applications for the behavioral sciences*, 1993, p. 182.

## **Chapter Eight**

### **Presentation of Data**

#### **Introduction**

The purpose of this study was to ascertain the effects of cultural relevance on student achievement and attitudes for information literacy instruction among fourth and eighth grade Kuwaiti students. Participants in the study received instruction for information literacy that was either culturally relevant, i.e., Kuwaiti-oriented, or not culturally relevant, i.e., Western-oriented. At the conclusion of instruction, the students' ability to respond to an information problem was tested, as well as their recall of the Big Six strategy. In addition, their attitudes toward information problem solving, the Big Six strategy and the classroom instruction were measured with a questionnaire. The procedures used to implement and monitor this experiment and to collect, compile and analyse the data have been introduced in Chapter Seven. In the present chapter, the results of the analyses are reported.

The data presented in this chapter were collected from September to November, 2000, and are derived from students' responses on the pre- and post-tests (the difference of which resulted in achievement scores), the final test and the attitude questionnaire. The data was analysed using the Statistics Package for Social Sciences (SPSS) and used to determine the effect of cultural relevance on achievement and attitudes in information literacy instruction. A priori level of significance was established at the  $p \leq 0.05$  level.

Chapter Eight is comprised of four sections. The first section describes the summary measures of all dependent variables (pre-, post- and final tests), including the minimum and maximum scores, means and standard deviations. It also reports the Analysis of Variance (ANOVA) for the independent variables (grade, gender and type of instruction) for each of the dependent variables. The second section presents the results of independent samples *t* tests for equality of means conducted with regard to the achievement score in order to determine if significant differences exist between pairs of independent groups. The third section presents the results of



independent samples *t* tests for equality of means conducted with regard to the final test score in order to determine if significant differences exist between pairs of independent groups. The fourth section presents the results of the analysis conducted with regard to the students' attitudes indicated in the respective questionnaires in order to determine if significant differences exist between pairs of independent groups. A summary of findings is presented in the conclusion.

**Section I: Summary Measures**

This study was planned so that learning outcomes achieved through instruction based on the inclusion or exclusion of cultural relevance in the curricula could be quantified and compared. The subjects for the study were Kuwaiti students who met independently according to grade (fourth or eighth grade), type of instruction (Kuwaiti- or Western-oriented) and gender. The students took a pre-test before the onset of instruction, and a post-test and final test after the completion of instruction. Table 8.1 presents a case processing summary and Table 8.2 describes the statistics for the pre-, post- and final tests.

**Table 8.1 Case Processing Summary**

Combinations	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Pre-test and Grade level	117	92.9	9	7.1	126	100
Post-test and Grade level	125	99.2	1	.8	126	100
Final test and Grade level	126	100.0	0	.0	126	100
Pre-test and Gender	117	92.9	9	7.1	126	100
Post-test and Gender	125	99.2	1	.8	126	100
Final test and Gender	126	100.0	0	.0	126	100
Pre-test and Type of Instruction	117	92.9	9	7.1	126	100
Post-test and Type of Instruction	125	99.2	1	.8	126	100
Final test and Type of Instruction	126	100.0	0	.0	126	100

The total number of students who received instruction for information literacy was 142; however, only 126 students were considered Kuwaiti citizens according to the criteria set forth in this study (i.e., at least one parent is Kuwaiti). As indicated in the table above, 126 students' final test scores were used in the analysis. The number of post-test scores used in the analysis was 125; this was due to one student removing the post-test from the classroom and taking it home to complete it without the prior knowledge of the researcher. Since this post-test was not completed in the specified time and the possibility of external assistance existed, it could not be considered in the data analysis. The number of pre-test scores used in the analysis was 117; this is due to the fact that nine students began attending school after the administration of the pre-test during the first week of instruction and therefore missed the test.

**Table 8.2 General Descriptive Statistics**

	N	Minimum Statistic	Maximum Statistic	Summary Statistics		
				Mean	Std. Deviation	Std. Error
Pre-test	117	0	38	12.86	8.74	0.81
Post-test	125	6	39	21.91	8.20	0.73
Final test	126	0	13.5	4.143	2.778	0.247

The total possible score for the pre- and post-tests was 45 points. The difference between pre- and post-test mean scores is 9.05 points, which reflects a 71% mean improvement among all students. The total possible score for the final test was twelve points for fourth grade students and 18 points for eighth grade students. The mean score of 4.143 represents 34.5% of the total possible score for the fourth grade final test and 23% of the total possible score for the eighth grade final test. This mean score is relatively low for each group; contributing factors may be the students' lack of previous knowledge of the test and, therefore, their state of unpreparedness for taking the test. However, since the final test was designed specifically to test the students' recall of the Big Six strategy, advance notice of the test was not given to the students since it could have had an effect on the scores. To give a more in-depth look at the scores among the various independent groups, the three test scores are further analysed below in tables 8.3, 8.4 and 8.5 by grade, gender and type of instruction, respectively.



**Table 8.3 Descriptive Statistics: Test Scores by Grade**

Grade		Pre-test	Post-test	Final
Four	No. of students	72	75	76
	Mean score	7.65	17.97	3.118
	Std. Deviation	4.69	6.74	2.039
Eight	No. of students	45	50	50
	Mean score	21.20	27.82	5.700
	Std. Deviation	7.11	6.50	3.036
Total	No. of students	117	125	126
	Mean score	12.86	21.91	4.143
	Std. Deviation	8.74	8.20	2.778

The fourth grade students mean pre-test score was much lower than the mean eighth grade score; this is expected due to the latter's experience and educational background. The fourth grade students' mean achievement between pre- and post-tests was 10.32 points, or a 135% improvement. Eighth grade students improved an average of 6.62 points, representing a 31% improvement. The eighth grade pre-test mean score is only slightly higher than the fourth grade post-test mean score, indicating that seven 40-minute lessons at the fourth grade level can boost information literacy nearly to the level of eighth grade students who did not have similar instruction. The final test mean score for fourth grade students represented 26% of the possible 12 points. Similarly, the final test mean score for eighth grade students represented 31.6% of the possible 18 points. A more in-depth analysis of test scores between grades was conducted with *t* tests to determine if the differences are statistically significant; results are presented in Sections II and III of this chapter. Appendix 9 presents the pre-test score, post-test score, achievement score and final test score according to grade, gender and type of instruction for each student.



**Table 8.4 Descriptive Statistics: Test Scores by Gender**

Gender		Pre-test	Post-test	Final
Males	No. of students	66	70	70
	Mean score	13.41	21.29	4.007
	Std. Deviation	9.68	8.99	2.641
Females	No. of students	51	55	56
	Mean score	12.16	22.71	4.313
	Std. Deviation	7.38	7.09	2.955
Total	No. of students	117	125	126
	Mean score	12.86	21.91	4.143
	Std. Deviation	8.74	8.20	2.778

The pre-test mean score for males was higher than for females, indicating that they had better information problem solving ability before the onset of instruction. However, females' scores improved 87% (from 12.16 to 22.71) while males' scores increased 59% (from 13.41 to 21.29). Females' achievement from the pre-test to the post-test was higher, as was their mean score on the final test. A more in-depth analysis of achievement between genders was conducted with independent samples *t* tests to determine if the difference is statistically significant. These results are presented in Sections II and III of this chapter.

**Table 8.5 Descriptive statistics: Test Scores by Type of Instruction**

Type of Instruction		Pre-test	Post-test	Final
Kuwaiti	No. of students	63	69	69
	Mean score	13.75	23.61	4.659
	Std. Deviation	9.94	8.39	2.976
Western	No. of students	54	56	57
	Mean score	11.83	19.82	3.518
	Std. Deviation	7.05	7.53	2.396
Total	No. of students	117	125	126
	Mean score	12.86	21.91	4.143
	Std. Deviation	8.74	8.20	2.778



The pre-test mean score for students in the Kuwaiti-oriented group was almost two points higher than those in the Western-oriented group. Post-test mean scores indicate that the Kuwaiti group improved by 72% and the Western group improved by 67%. In addition, the Kuwaiti group's final test mean score (4.659) was higher than the Western groups' mean score (3.518). A more in-depth analysis of achievement between students that received different types of instruction was conducted with independent samples *t* tests to determine if the differences are statistically significant; results are presented in Sections II and III of this chapter.

Tables 8.6, 8.7 and 8.8 present the results of the ANOVA for each of the dependent variables. This procedure was used to test whether group means are equal in the populations by comparing the sample sum squares' deviations between groups to that estimated within the groups.

**Table 8.6 Analysis of Variance for Pre-Test**

Source	df	Mean Square	F	Sig.
Grade	1	4145.867	136.760	.000
Gender	1	8.653	.285	.594
Type of Instruction	1	7.163	.236	.628
Grade and Gender	1	86.735	2.861	.094
Grade and Type of Instruction	1	129.723	4.279	.041
Gender and Type of Instruction	1	34.178	1.127	.291
Grade and Gender and Type of Instruction	1	138.906	4.582	.035

Indicates a statistical significance at the 0.05 level

The results of the ANOVA for the pre-test show a statistically significant difference among grade levels and combinations that included grade levels. This result is expected due to the natural difference in the information problem solving ability between fourth and eighth grade students before the onset of instruction. Likewise, when grade level was combined with type of instruction and when this pair was combined with gender, statistically significant differences existed. However,



ANOVA tests conducted for gender, type of instruction and the combination of these variables did not result in statistically significant differences, indicating that the means of the pre-test scores are not statistically significant with respect to grades and gender.

**Table 8.7 Analysis of Variance for Post-Test**

Source	df	Mean Square	F	Sig.
Grade	1	2342.823	58.342	.000
Gender	1	155.731	3.878	.051
Type of Instruction	1	200.679	4.997	.027
Grade and Gender	1	53.913	1.343	.249
Grade and Type of Instruction	1	6.169	.154	.696
Gender and Type of Instruction	1	169.295	4.216	.042
Grade and Gender and Type of Instruction	1	114.993	2.864	.093


■ Indicates a statistical significance at the 0.05 level

The results of the ANOVA for the post-test show a significant difference among grade levels, similar to results for the pre-test. This result is expected due to the substantial initial difference in information problem solving abilities between grades. Analysis by the type of instruction revealed a significance level of 0.027, indicating that there is a statistically significant difference between groups that received culturally relevant information literacy instruction and those whose instruction was not culturally relevant. Analysis by gender did not meet the criteria of statistical significance set for the study; however, analysis by gender and type of instruction combined resulted in a statistically significant level of .042. A more in-depth analysis of achievement between students that received different types of instruction was conducted with independent samples *t* tests; these results are presented in Sections II and III of this chapter.



**Table 8.8 Analysis of Variance for Final Test**

Source	df	Mean Square	F	Sig.
Grade	1	159.892	30.429	.000
Gender	1	20.527	3.906	.050
Type of Instruction	1	41.007	7.804	.006
Grade and Gender	1	17.263	3.285	.072
Grade and Type of Instruction	1	67.748	12.893	.000
Gender and Type of Instruction	1	26.716	5.084	.026
Grade and Gender and Type of Instruction	1	.390	.074	.786

 Indicates a statistical significance at the 0.05 level

There is a significant difference between the final test scores of fourth and eighth grade students (0.000), which is consistent with the findings of the ANOVA tests for other dependent variables. Since the final test was not coupled with a pre-test, the results above can be used to test the null hypotheses that there is no difference between students who received different types of instruction and there is no difference between genders within the same type of instruction. The results of the ANOVA for the final test revealed a significant difference in the final test scores between type of instruction and gender, both singularly and combined. Thus the decision the researcher must take based on the results of the ANOVA is to reject the null hypotheses and conclude that cultural relevance in instruction for information literacy results in different achievement levels, and that there is a difference among genders within the same type of instruction. A more in-depth analysis of the final test scores was conducted with independent samples *t* tests to reveal the source of the difference; results are presented in Section III of this chapter.



## Section II: Achievement Scores

The achievement score for each student reflects the difference between the pre-test and the post-test scores. The scores reflect the students' improvement in the ability to solve an information problem after a course of instruction for information literacy. Some students received instruction that was culturally relevant, i.e., the examples used therein were related to Kuwaiti, Arab or Islamic culture, and some students received instruction that was not culturally relevant, i.e., the examples used therein were related to English or American culture. The students' achievement scores were compared to test the following hypotheses:

H<sub>01</sub>: There is no significant difference in the mean achievement scores in information problem solving between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.  
vs

H<sub>a1</sub>: There is a significant difference in the mean achievement scores in information problem solving between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.

H<sub>04</sub>: There is no significant difference in the test scores and attitudes between males and females within the same type of instruction.  
vs

H<sub>a4</sub>: There is a significant difference in the test scores and attitudes between males and females within the same type of instruction.

The achievement scores were analysed with independent samples *t* tests for equality of means and computed with the Statistics Package for Social Sciences (SPSS) for Windows. Since one of the assumptions underlying the *t* test is equality of variance, Levene's Test for equality of variance was computed prior to each *t* test. When  $p > .05$ , then equal variance can be assumed and the corresponding significance value was reported. Conversely, when  $p \leq .05$ , then equal variance cannot be assumed and the corresponding significance value was reported.

To investigate the effect of culturally relevant instruction on groups of students, the mean achievement scores within each type of instruction were compared, i.e., Kuwaiti- and Western-oriented. Table 8.9 shows the mean achievement scores achieved by students in the Kuwaiti-oriented and Western-oriented groups.

**Table 8.9    A Comparison of Achievement Scores between Kuwaiti and Western Groups**

Group	N	Mean scores
Kuwaiti	63	9.5714 ± 6.2855
Western	53	7.8113 ± 5.6298

Sig. = 0.118

The students who received culturally relevant instruction, i.e., the Kuwaiti group, had higher achievement than their counterparts in the Western group. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.118. The decision the researcher must make based on the results of the *t* test is that the null hypothesis (*H*<sub>01</sub>) cannot be rejected, indicating that culturally relevant instruction for information literacy, compared to that which was not culturally relevant, did not significantly affect student achievement in information problem solving ability.

To further investigate the differences between types of instruction, each grade level was examined separately. Tables 8.10 and 8.11 show the mean achievement scores achieved by fourth grade and eighth grade students, respectively.

**Table 8.10    A Comparison of Achievement Scores between Kuwaiti and Western Groups in the Fourth Grade**

Group	N	Mean scores
Kuwaiti, fourth grade	35	12.4571 ± 4.7672
Western, fourth grade	36	8.5833 ± 5.9106

Sig. = 0.003



Among fourth grade students, those who received culturally relevant instruction, i.e., the Kuwaiti group, clearly outscored their counterparts in achievement. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.003. The decision the researcher must make based on this result is that the null hypothesis ( $H_{01}$ ) is rejected for fourth grade students, and that culturally relevant instruction for information literacy significantly affects achievement in information problem solving abilities among fourth grade students.

**Table 8.11 A Comparison of Achievement Scores between Kuwaiti and Western Groups in the Eighth Grade**

Group	N	Mean scores
Kuwaiti, eighth grade	28	5.9643 ± 6.1493
Western, eighth grade	17	6.1765 ± 4.7333

Sig. = 0.904

Among the eighth grade students, those who received culturally relevant instruction, i.e., the Kuwaiti group, scored slightly lower than their counterparts in the Western group. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.904. The decision the researcher must make based on the results of the *t* test is that the null hypothesis ( $H_{01}$ ) cannot be rejected for eighth grade students, indicating that culturally relevant instruction for information literacy did not significantly affect achievement in information problem solving ability among eighth grade students.

A comparison of the results of these two independent groups suggests that culturally relevant instruction may have more impact on the information problem solving abilities of fourth grade students than on that of eighth grade students. This could be due to the possibility that the younger students in the sample population had less experience and exposure to Western images and ideas than their older counterparts. The absorption and transfer of knowledge among the younger students, therefore, would have been impeded by their lesser degree of knowledge and experience in Western information problems.

To investigate the difference between males and females, independent samples *t* tests for equality of means between genders were examined for differences between the Kuwaiti and Western groups. Tables 8.12 and 8.13 show the mean achievement scores of males and females, respectively.

**Table 8.12 A Comparison of Achievement Scores between Kuwaiti and Western Groups among Males**

Group	N	Mean scores
Kuwaiti, males	38	8.7632 ± 6.5200
Western, males	28	5.6071 ± 4.4584

Sig. = 0.023

Among the male students, those who received culturally relevant instruction, i.e., the Kuwaiti group, had approximately 50% higher achievement than their counterparts in the Western group. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.023. The decision the researcher must make based on this result is that the null hypothesis ( $H_{01}$ ) is rejected for male students, and that culturally relevant instruction for information literacy significantly affects achievement in information problem solving abilities among males.

**Table 8.13 A Comparison of Achievement Scores between Kuwaiti and Western Groups among Females**

Group	N	Mean scores
Kuwaiti, females	25	10.80 ± 5.8238
Western, females	25	10.28 ± 5.8561

Sig. = 0.754

A similar comparison among female students shows a statistical significance of 0.754, with a higher mean score for those who received information literacy instruction that was culturally relevant. However, these values do not support the rejection of the null hypothesis ( $H_{01}$ ). The researcher concludes that, among females, culturally relevant instruction for information literacy did not significant affect improvement in information problem solving ability.

A comparison of the results among these two independent groups, i.e., males and females, suggests that culturally relevant instruction may be more effective for males than females. These findings combined with results presented in Tables 8.10 and 8.11 suggest that culturally relevant instruction for information problem solving is effective among fourth grade boys more than any other group of students.

To test the hypothesis that there is no significant difference in the achievement scores between males and females within the same type of instruction ( $H_{04}$ ), independent samples  $t$  tests for equality of means were computed for males and females within each type of instruction. However, before these analyses were undertaken, a comparison of all males' and females' achievement scores was examined. Table 8.14 presents comparisons between all males and females that participated in the study.

**Table 8.14 A Comparison of Achievement Scores between Males and Females**

Group	N	Mean scores
Males	66	7.4242 $\pm$ 5.9097
Females	50	10.540 $\pm$ 5.7860

Sig. = 0.005

Among all students, females achieved approximately 42% more than males between the pre- and post-test. An independent samples  $t$  test for equality of means resulted in a statistical significance of 0.005, indicating that the difference between males' and females' achievement scores was statistically significant. Further comparisons were made between males' and females' scores within each type of instruction; these results are presented in Tables 8.15 and 8.16.



**Table 8.15 A Comparison of Achievement Scores between Males and Females in the Western Group**

Group	N	Mean scores
Males, Western	28	5.6071 $\pm$ 4.4584
Females, Western	25	10.280 $\pm$ 5.8561

Sig. = 0.002

Among all students who received Western-oriented instruction for information literacy, females had higher achievement scores than males; in fact, they achieved almost twice as much. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.002. The decision the researcher must make based on this result is that the null hypothesis ( $H_{04}$ ) is rejected, and that there is a significant difference in the test scores between males and females within Western-oriented instruction. Table 8.16 presents the achievement scores of males and females in the Kuwaiti-oriented group.

**Table 8.16 A Comparison of Achievement Scores between Males and Females in the Kuwaiti Group**

Group	N	Mean scores
Males, Kuwaiti	38	8.7632 $\pm$ 6.5200
Females, Kuwaiti	25	10.800 $\pm$ 5.8238

Sig. = 0.211

Among all students who received Kuwaiti-oriented instruction for information literacy, females had higher achievement scores than males. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.211. The decision the researcher must make based on this result is that the null hypothesis ( $H_{04}$ ) cannot be rejected, and that there is not a significant difference in the test scores between males and females within Kuwaiti-oriented instruction.

The results of these tests indicate that males respond significantly less favourably to instruction that is not culturally relevant and that when instruction is culturally relevant, the difference between males' and females' achievement is not significant.

In consideration of the findings reported in Section II of this chapter regarding the achievement scores, the following conclusions can be drawn:

1. Overall, there is not a significant difference in the mean achievement scores between students whose instruction for information literacy was culturally relevant and those whose instruction was not culturally relevant.
2. With regard to eighth grade students, there is not a significant difference in the mean achievement scores between students whose instruction was culturally relevant and those whose instruction was not culturally relevant.
3. With regard to fourth grade students, there is a significant difference in the mean achievement scores between students whose instruction was culturally relevant and those whose instruction was not culturally relevant (sig. = 0.003).
4. With regard to males, there is a significant difference in the mean achievement scores between students whose instruction was culturally relevant and those whose instruction was not culturally relevant (sig. = 0.023).
5. With regard to females, there is not a significant difference in the mean achievement scores between students whose instruction was culturally relevant and those whose instruction was not culturally relevant.
6. Among all students, there is a significant difference between males' and females' mean achievement scores (sig. = 0.005).
7. Within the Western group, there is a significant difference in the mean achievement scores between males and females (sig. = 0.002).
8. Within the Kuwaiti group, there is not a significant difference in the mean achievement scores between males and females.

The results of this section of the presentation of data should be viewed in the light of Section II and Section IV before final conclusions can be drawn.



### Section III: Final Test Scores

The final test scores reflect the students' recall of the Big Six™ strategy for information problem solving. The fourth grade students' test was comprised of two parts: in the first part students were asked to match each Big Six step with its definition and in the second part they were asked to order the steps in the information problem solving strategy in the correct sequence. The eighth grade students were asked to describe in a sentence or two how they would apply each step in the Big Six strategy to solving a hypothetical information problem. Comparisons were made to test the hypotheses:

H<sub>02</sub>: There is no significant difference in the mean final test scores between students whose Big Six instruction was culturally relevant and those whose Big Six instruction was not culturally relevant.

vs

H<sub>a2</sub>: There is a significant difference in the mean final test scores between students whose Big Six instruction was culturally relevant and those whose Big Six instruction was not culturally relevant.

H<sub>04</sub>: There is no significant difference in the test scores and attitudes between males and females within the same type of instruction.

vs

H<sub>a4</sub>: There is a significant difference in the test scores and attitudes between males and females within the same type of instruction.

The final scores were analysed with independent samples *t* tests for equality of means and computed with the Statistics Package for Social Sciences (SPSS) for Windows. Since one of the assumptions underlying the *t* test is equality of variance, Levene's Test for equality of variance was computed prior to each *t* test. When  $p > .05$ , then equal variance can be assumed and the corresponding significance value was reported. Conversely, when  $p \leq .05$ , then equal variance cannot be assumed and the corresponding significance value was reported.

To investigate the effect of culturally relevant instruction on groups of students, the mean scores within each type of instruction were compared, i.e., Kuwaiti- and Western-oriented. Table 8.17 shows the mean scores achieved by students for the final test.

**Table 8.17 A Comparison of Final Test Scores between Kuwait and Western Groups**

Group	N	Mean scores
Kuwaiti	69	4.659 ± 2.976
Western	57	3.518 ± 2.396

Sig. = 0.021

The students who received culturally relevant instruction, i.e., the Kuwaiti group, clearly outscored their counterparts in the Western group. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.021. The decision the researcher must make based on the results of the *t* test is that the null hypothesis ( $H_{02}$ ) is rejected, indicating that among all students, those who received culturally relevant instruction for information literacy had a significantly higher recall of the Big Six information problem solving strategy than those who received instruction that was not culturally relevant.

To further investigate the differences between types of instruction, each grade level was examined separately. Table 8.18 and 8.19 show the mean scores achieved by fourth grade and eighth grade students, respectively.

**Table 8.18 A Comparison of Final Test Scores between Kuwaiti and Western Groups in the Fourth Grade**

Group	N	Mean scores
Kuwaiti, fourth grade	38	2.974 ± 1.852
Western, fourth grade	38	3.263 ± 2.226

Sig. = 0.540



Among the fourth grade students, those who received culturally relevant instruction, i.e., the Kuwaiti group, scored slightly lower than their counterparts in the Western group. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.540. The decision the researcher must make based on the results of the *t* test is that the null hypothesis ( $H_{02}$ ) cannot be rejected for fourth grade students, indicating that culturally relevant instruction for information literacy did not significantly affect recall of the Big Six information problem solving strategy among fourth grade students.

**Table 8.19 A Comparison of Final Test Scores between Kuwaiti and Western Groups in the Eighth Grade**

Group	N	Mean scores
Kuwaiti, eighth grade	31	6.726 ± 2.798
Western, eighth grade	19	4.026 ± 2.695

Sig. = 0.002

Among eighth grade students, those who received culturally relevant instruction scored higher than their counterparts who received Western-oriented instruction. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.002. The decision the researcher must make based on the results of the *t* test is that the null hypothesis ( $H_{02}$ ) is rejected for eighth grade students, indicating that students who received culturally relevant instruction for information literacy had a significantly higher recall of the Big Six information problem solving strategy than those who received instruction that was not culturally relevant.

A comparison of the results of these two independent groups suggests that culturally relevant instruction may be more effective among eighth grade students than among fourth grade students. In fact, the significant difference between final test scores reported for all students (Table 8.17) seems to be a result primarily of the differences among eighth grade students.

To investigate the difference between males and females, independent samples *t* tests for equality of means between genders were examined for differences between the Kuwaiti and Western groups. Tables 8.20 and 8.21 show the mean scores achieved by males and females, respectively.

**Table 8.20 A Comparison of Final Test Scores between Kuwaiti and Western Groups among Males**

Group	N	Mean scores
Kuwaiti, males	41	4.902 ± 2.486
Western, males	29	2.741 ± 2.351

Sig. = 0.000

Among the male students, those who received culturally relevant instruction, i.e., the Kuwaiti group, achieved a mean score almost double their counterparts in the Western group. An analysis of equality of means using the independent samples *t* test showed a statistical significance of 0.000. These findings support the rejection of the null hypothesis ( $H_{02}$ ). The researcher concludes that among all males, those who receive culturally relevant instruction for information literacy had higher recall of the Big Six information problem solving strategy than those who received instruction that was not culturally relevant.

**Table 8.21 A Comparison of Final Test Scores between Kuwaiti and Western Groups among Females**

Group	N	Mean scores
Kuwaiti, females	28	4.304 ± 3.596
Western, females	28	4.321 ± 2.204

Sig. = 0.982

A similar comparison among female students show a statistical significance of 0.982, with a higher mean score for those who received information literacy instruction that was *not* culturally relevant, i.e., the Western group. However, because the value is much greater than 0.05, these findings do not support the rejection of the null hypothesis ( $H_{02}$ ). The researcher concludes that, among females, culturally relevant



instruction for information literacy did not significantly affect recall of the Big Six information problem solving strategy.

A comparison of the results among these two independent groups, i.e., males and females, suggests that culturally relevant instruction may be more effective for males than females. These findings combined with results presented in Tables 8.18 and 8.19, suggest that culturally relevant instruction of the Big Six strategy is effective among eighth grade boys more than any other combination of students.

To test the hypothesis that there is no significant difference in the test scores between males and females within the same type of instruction ( $H_{04}$ ), independent samples  $t$  tests for equality of means were computed for males and females within each type of instruction. However, before these analyses were undertaken a comparison of all males' and all females' final test scores were examined. Table 8.22 presents comparisons between all males and females that participated in the study.

**Table 8.22 A Comparison of Final Test Scores between Males and Females**

Group	N	Mean scores
Males	70	4.007 $\pm$ 2.641
Females	56	4.313 $\pm$ 2.955

Sig. = 0.542

Among all students, males and females scored similarly on the final test. An independent samples  $t$  test for equality of means resulted in a statistical significance of 0.542. This level of significance supports findings reported in Chapter Seven regarding the normality of distribution among sample populations. Further  $t$  tests were undertaken to investigate whether differences exist between males and females within the same type of instruction. Tables 8.23 and 8.24 present a comparison between males and females within the Western group and the Kuwaiti group, respectively.

**Table 8.23 A Comparison of Final Test Scores between Males and Females in the Western Group**

Group	N	Mean scores
Males, Western	29	2.741 ± 2.351
Females, Western	28	4.321 ± 2.204

Sig. = 0.011

Among all students who received Western-oriented instruction for information literacy, females scored higher on the final test than males. An analysis of equality of means using the *t* test showed a statistical significance of 0.011. The decision the researcher must make based on the results of the *t* test is to conclude that the null hypothesis ( $H_{04}$ ) can be rejected, indicating that there is a significant difference between males' and females' test scores after instruction that is not culturally relevant; the scores for females were significantly higher.

**Table 8.24 A Comparison of Final Test Scores between Males and Females in the Kuwaiti Group**

Group	N	Mean scores
Males, Kuwaiti	41	4.902 ± 2.486
Females, Kuwaiti	28	4.304 ± 3.596

Sig. = 0.416

Among all students who received Kuwaiti-oriented instruction for information literacy, males scored higher on the final test than females. An analysis of equality of means using the *t* test showed a statistical significance of 0.416. The decision that the researcher must make based on the results of the *t* test is that the null hypothesis ( $H_{04}$ ) cannot be rejected, indicating that there is not a significant difference between males' and females' test scores after instruction that is culturally relevant.

The results of these tests indicate that males respond significantly less favourably to instruction that is not culturally relevant and that when instruction is culturally relevant, the difference between males' and females' scores is not significant.



In consideration of findings reported in Section III of this chapter regarding the final test score, the following conclusions can be drawn:

1. There is a significant difference in the mean final test scores between students whose instruction for information literacy was culturally relevant and those whose instruction was not culturally relevant (sig. = 0.021).
2. With regard to eighth grade students, there is a significant difference in the mean final test scores between students whose instruction was culturally relevant and those whose instruction was not culturally relevant (sig. = 0.002).
3. With regard to fourth grade students, there is not a significant difference in the mean final test scores between students whose instruction was culturally relevant and those whose instruction was not culturally relevant.
4. With regard to males, there is a significant difference in the mean final test scores between students whose instruction was culturally relevant and those whose instruction was not culturally relevant (sig. = 0.000).
5. With regard to females, there is not a significant difference in the mean final test scores between students whose instruction was culturally relevant and those whose instruction was not culturally relevant.
6. Among all students, there is not a significant difference between males' and females' mean final test scores.
7. Within the Western group, there is a significant difference in the final test scores between males and females (sig. = 0.011).
8. Within the Kuwaiti group, there is not a significant difference in the final test scores between males and females.

The results of this section of the presentation of data should be viewed in the light of Section II and Section IV before final conclusions can be drawn.

**Section IV: Attitude Questionnaire**

A questionnaire was administered to all students who participated in the comparative instruction for information literacy. Fourth grade students responded to 15 statements on a 4-point Likert scale and eighth grade students responded to 20 statements on a 5-point scale; the questionnaires are presented in Chapter Six. The responses were analysed with Chi Square ( $\chi^2$ ) and computed with the Statistics Package for Social Sciences (SPSS) to test the validity of the following hypotheses:

H<sub>03</sub>: There is no significant difference in the attitudes towards information problem solving and the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.

vs

H<sub>a3</sub>: There is a significant difference in the attitudes towards information problem solving and the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.

H<sub>04</sub>: There is no significant difference in the test scores and attitudes between males and females within the same type of instruction.

vs

H<sub>a4</sub>: There is a significant difference in the test scores and attitudes between males and females within the same type of instruction.

In the following pages, each statement listed in the questionnaire is presented with a table summarising students' responses divided by the type of instruction and gender. Under each table is the statistical significance for responses within the Kuwaiti group, within the Western group and among all students. The responses of fourth grade students are presented in tables 8.25 to 8.42 and the responses of eighth grade students are presented in tables 8.43 to 8.64. Discussion follows each table.



**Table 8.25 Responses to Statement 1 of the Fourth Grade Questionnaire by Gender and Type**

1. The Big Six is useful for solving information problems.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	10	27.8	4	11.1	3	8.3	3	8.3	20	55.6
Kuwaiti Females	5	13.9	6	16.7	5	13.9	0	-	16	44.4
Total Kuwaiti	15	41.7	10	27.8	8	22.2	3	8.3	36	100
Western Males	14	42.4	1	3	0	-	2	6.1	17	51.5
Western Females	2	6.1	3	9.1	6	18.2	5	15.2	16	48.5
Total Western	16	48.5	4	12.1	6	18.2	7	21.2	33	100
All Students	31	44.9	14	20.3	14	20.3	10	14.5	69	100

Kuwaiti:       Sig. = 0.159  
Western:       Sig. = 0.001  
Total:         Sig. = 0.224

Among fourth grade students, 65% agree with statement 1. The Western-oriented and Kuwaiti-oriented groups had similar levels of agreement; however, 21% of students in the Western group expressed disagreement, compared to only 8.3% of students in the Kuwaiti group. Chi square analyses between the two groups that received different types of instruction revealed a correlation between them; therefore, there is insufficient evidence to reject  $H_{03}$ . Within the Kuwaiti group, males had a stronger favourable response than females although no females disagreed with the statement. Within the Western group, almost all the males agreed with the statement and only 31% of the females agreed. Chi square analyses revealed a correlation between males and females within the Kuwaiti group (0.159), but not within the Western group (0.001). Therefore, it is the decision of the researcher to reject  $H_{04}$  with respect to Kuwaiti students who receive Western-oriented instruction.



**Table 8.26 Responses to Statement 2 of the Fourth Grade Questionnaire by Gender and Type**

2. I don't think I can solve information problems.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
	N	%	N	%	N	%	N	%	N	%
Grade 4										
Kuwaiti Males	1	2.8	1	2.8	10	27.8	8	22.2	20	55.6
Kuwaiti Females	1	2.8	2	5.6	9	25	4	11.1	16	44.4
Total Kuwaiti	2	5.6	3	8.3	19	52.8	12	33.3	36	100
Western Males	0	-	1	3	7	21.2	9	27.3	17	51.5
Western Females	1	3	1	3	5	15.2	9	27.3	16	48.5
Total Western	1	3	2	6.1	12	36.4	18	54.5	33	100
All Students	3	4.3	5	7.2	31	44.9	30	43.5	69	100

Kuwaiti:       Sig. = 0.731  
 Western:       Sig. = 0.728  
 Total:           Sig. = 0.363

Among all fourth grade students, almost equal numbers responded with disagreement or uncertainty to statement 2. Among the Kuwaiti-oriented group, more than half of the students expressed uncertainty and a third disagreed; among the Western – oriented group the reverse was true. Overall, the students in the Western group responded with more confidence in their ability to solve information problems. However, Chi square analyses show a correlation between the two groups that received different types of instruction and between males’ and females’ attitudes within the groups. Therefore, with reference to statement 2, there is insufficient evidence to reject the null hypotheses H<sub>03</sub> and H<sub>04</sub>, indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.27 Responses to Statement 3 of the Fourth Grade Questionnaire by Gender and Type**

3. The Big Six was hard to understand.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
	N	%	N	%	N	%	N	%	N	%
Grade 4										
Kuwaiti Males	8	22.2	2	5.6	4	11.1	6	16.7	20	55.6
Kuwaiti Females	4	11.1	6	16.7	1	2.8	5	13.9	16	44.4
Total Kuwaiti	12	33.3	8	22.2	5	13.9	11	30.6	36	100
Western Males	9	27.3	1	3	2	6.1	5	15.2	17	51.5
Western Females	6	18.2	4	12.1	4	12.1	2	6.1	16	48.5
Total Western	15	45.5	5	15.2	6	18.2	7	21.2	33	100
All Students	27	39.1	13	18.8	11	15.9	18	26.1	69	100

Kuwaiti: Sig. = 0.184

Western: Sig. = 0.228

Total: Sig. = 0.598

Among all fourth grade students, 58% agreed with this statement to some extent. Students in the Western-oriented group had stronger agreement to this statement than students in the Kuwaiti-oriented group; similarly, students in the Kuwaiti group expressed less disagreement. Within the Kuwaiti group, males and females responded similarly, with at least half of each group agreeing to some extent to the statement. Within the Western group, responses were also similar between males and females, with almost 60% of each group agreeing to some extent. Chi square analyses between groups that received different types of instruction and between males and females within the groups do not provide sufficient evidence to reject  $H_{03}$  and  $H_{04}$ , indicating that with regard to statement 3, there is not a significant difference in the attitudes of students who receive different types of instruction or between males and females within the same type of instruction.



**Table 8.28 Responses to Statement 4 of the Fourth Grade Questionnaire by Gender and Type**

4. Learning how to solve information problems is important.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
	N	%	N	%	N	%	N	%	N	%
Grade 4										
Kuwaiti Males	13	36.1	3	8.3	3	8.3	1	2.8	20	55.6
Kuwaiti Females	13	36.1	1	2.8	1	2.8	1	2.8	16	44.4
Total Kuwaiti	26	72.2	4	11.1	4	11.1	2	5.6	36	100
Western Males	11	33.3	4	12.1	2	6.1	0	-	17	51.5
Western Females	9	27.3	4	12.1	3	9.1	0	-	16	48.5
Total Western	20	60.6	8	24.2	5	15.2	0	-	33	100
All Students	46	66.7	12	17.4	9	13	2	2.9	69	100

Kuwaiti: Sig. = 0.665

Western: Sig. = 0.831

Total: Sig. = 0.250

Among all fourth grade students, 84% agree with this statement, and similar responses were given by students within each type of instruction. Within the Kuwaiti-oriented group, responses from males and females were similar, as were responses from males and females within the Western-oriented group. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 4, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.29 Responses to Statement 5 of the Fourth Grade Questionnaire by Gender and Type**

5. I did not like learning about information problem solving.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	3	8.3	2	5.6	4	11.1	11	30.6	20	55.6
Kuwaiti Females	2	5.6	3	8.3	4	11.1	7	19.4	16	44.4
Total Kuwaiti	5	13.9	5	13.9	8	22.2	18	50	36	100
Western Males	1	3	0	-	4	12.1	12	36.4	17	51.5
Western Females	6	18.2	4	12.1	3	9.1	3	9.1	16	48.5
Total Western	7	21.2	4	12.1	7	21.2	15	45.5	33	100
All Students	12	17.4	9	13	15	21.7	33	47.8	69	100

Kuwaiti: Sig. = 0.836

Western: Sig. = 0.004

Total: Sig. = 0.884

Among fourth grade students, 47.8% disagreed with this statement and 30.4% agreed to some extent. Responses between students in the Kuwaiti-oriented group were similar to those in the western-oriented group and the Chi square analyses showed a strong correlation between students' attitudes toward this statement. Within the Kuwaiti group, males and females responded similarly, with 50% disagreeing to the statement and 27.8% agreeing to some extent. Within the Western group, males responded with 71% disagreement and females with only 19% disagreement. Only one male (6%) agreed with the statement, compared to 63% of females who agreed. Chi square analyses revealed a correlation between males and females responses in the Kuwaiti group, but not in the Western group. Therefore,  $H_{04}$  can be rejected with reference to this statement, indicating that there is a difference in the attitudes between Kuwaiti males and females who receive Western-oriented instruction.



**Table 8.30 Responses to Statement 6 of the Fourth Grade Questionnaire by Gender and Type**

6. I am better at solving information problems now.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	11	30.6	4	11.1	3	8.3	2	5.6	20	55.6
Kuwaiti Females	3	8.3	6	16.7	6	16.7	1	2.8	16	44.4
Total Kuwaiti	14	38.9	10	27.8	9	25	3	8.3	36	100
Western Males	8	24.2	4	12.1	3	9.1	2	6.1	17	51.5
Western Females	7	21.2	3	9.1	4	12.1	2	6.1	16	48.5
Total Western	15	45.5	7	21.2	7	21.2	4	12.1	33	100
All Students	29	42	17	24.6	16	23.2	7	10.1	69	100

Kuwaiti:       Sig. = 0.115  
 Western:       Sig. = 0.956  
 Total:           Sig. = 0.843

Two-thirds of all fourth grade students agreed with this statement, and only 10% disagreed. Among the two independent groups that received different types of instruction, 66% agreed to this statement, but agreement among students in the Western-oriented group was stronger. In the Kuwaiti-oriented group, males responded more favourably than females and in the Western-oriented group males' and females' responses were nearly identical. Overall, Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 6, there is insufficient evidence to reject the null hypotheses H<sub>03</sub> and H<sub>04</sub>, indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.31 Responses to Statement 7 of the Fourth Grade Questionnaire by Gender and Type**

7. I would like to learn more about information problem solving.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	9	25	3	8.3	6	16.7	2	5.6	20	55.6
Kuwaiti Females	5	13.9	3	8.3	3	8.3	5	13.9	16	44.4
Total Kuwaiti	14	38.9	6	16.7	9	25	7	19.4	36	100
Western Males	8	24.2	3	9.1	2	6.1	4	12.1	17	51.5
Western Females	2	6.1	2	6.1	6	18.2	6	18.2	16	48.5
Total Western	10	30.3	5	15.2	8	24.2	10	30.3	33	100
All Students	24	34.8	11	15.9	17	24.6	17	24.6	69	100

Kuwaiti: Sig. = 0.388

Western: Sig. = 0.103

Total: Sig. = 0.749

Just over half of the fourth grade students agreed to this statement to some extent, with students in the Kuwaiti-oriented group responding more favourably than those in the Western-oriented group. Within the Kuwaiti group, 31% of the females disagreed with the statement, compared to 10% of the males who disagreed. Within the Western-oriented group the number of students who disagreed was comparable, but 65% of males agreed and only 25% of females agreed. However, Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 7, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.32 Responses to Statement 8 of the Fourth Grade Questionnaire by Gender and Type**

8. The Big Six is not helpful for solving information problems.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	2	5.6	1	2.8	4	11.1	13	36.1	20	55.6
Kuwaiti Females	3	8.3	0	-	4	11.1	9	25	16	44.4
Total Kuwaiti	5	13.9	1	2.8	8	22.2	22	61.1	36	100
Western Males	0	-	4	12.1	1	3	12	36.4	17	51.5
Western Females	0	-	3	9.1	4	12.1	9	27.3	16	48.5
Total Western	0	-	7	21.2	5	15.2	21	63.6	33	100
All Students	5	7.2	8	11.6	13	18.8	43	62.3	69	100

Kuwaiti: Sig. = 0.682

Western: Sig. = 0.310

Total: Sig. = 0.018

Among all fourth grade students, 62.3% disagree with this statement, with a similar number of students agreeing in both the Kuwaiti-oriented and the Western-oriented groups. However, 14% of the students in the Kuwaiti group strongly agreed with the statement while none of the students in the Western group did. A Chi square analysis of the responses reveals a weak correlation between the responses in these two groups, indicating that  $H_{03}$  can be rejected for this statement and that there is a significant difference between the attitudes of students whose instruction was culturally relevant and those whose instruction was not. Within the Kuwaiti group, males disagreed to the statement more than females, and within the Western group the same tendency was demonstrated. However, Chi square analyses show a strong correlation between males' and females' attitudes within the groups. Therefore, with reference to statement 8, there is insufficient evidence to reject  $H_{04}$ .



**Table 8.33 Responses to Statement 9 of the Fourth Grade Questionnaire by Gender and Type**

9. The examples the teacher used were good.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	14	38.9	2	5.6	4	11.1	0	-	20	55.6
Kuwaiti Females	13	36.1	1	2.8	2	5.6	0	-	16	44.4
Total Kuwaiti	27	75	3	8.3	6	16.7	0	-	36	100
Western Males	10	31.3	4	12.5	1	3.1	2	6.3	17	53.1
Western Females	10	31.3	3	9.4	2	6.3	0	-	15	46.9
Total Western	20	62.5	7	21.9	3	9.4	2	6.3	32	100
All Students	47	69.1	10	14.7	9	13.2	2	2.9	68	100

Kuwaiti: Sig. = 0.741

Western: Sig. = 0.501

Total: Sig. = 0.143

Among all fourth grade students, 84% agreed with this statement and both the Kuwaiti-oriented and Western-oriented groups responded with similar level of agreement. Within the Kuwaiti group, no students disagreed and the responses of males and females were highly correlated. Within the Western group, two males disagreed, compared to no females, and the responses of remaining students were highly correlated. Overall, Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 9, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.34 Responses to Statement 10 of the Fourth Grade Questionnaire by Gender and Type**

10. I think I can solve new information problems.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	8	22.2	5	13.9	5	13.9	2	5.6	20	55.6
Kuwaiti Females	1	2.8	9	25	5	13.9	1	2.8	16	44.4
Total Kuwaiti	9	25	14	38.9	10	27.8	3	8.3	36	100
Western Males	8	24.2	3	9.1	3	9.1	3	9.1	17	51.5
Western Females	7	21.2	4	12.1	2	6.1	3	9.1	16	48.5
Total Western	15	45.5	7	21.2	5	15.2	6	18.2	33	100
All Students	24	34.8	21	30.4	15	21.7	9	13	69	100

Kuwaiti: Sig. = 0.087

Western: Sig. = 0.944

Total: Sig. = 0.094

Among all students in the fourth grade, 65% agreed with this statement, with a higher level of agreement from students in the Western-oriented group. Of the students in the Kuwaiti-oriented group who did not agree to this statement, 77% expressed uncertainty and 23% disagreed. The students in the Western group who did not agree with this statement were almost equally divided between uncertainty and disagreement. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 10, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.35 Responses to Statement 11 of the Fourth Grade Questionnaire by Gender and Type**

11. It is not important to learn about information problem solving.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	0	—	1	2.9	3	8.8	16	47.1	20	58.8
Kuwaiti Females	0	-	2	5.9	4	11.8	8	23.5	14	41.2
Total Kuwaiti	0	-	3	8.8	7	20.6	24	70.6	34	100
Western Males	3	9.1	1	3	4	12.1	9	27.3	17	51.5
Western Females	1	3	1	3	2	6.1	12	36.4	16	48.5
Total Western	4	12.1	2	6.1	6	18.2	21	63.6	33	100
All Students	4	6	5	7.5	13	19.4	45	67.2	67	100

Kuwaiti: Sig. = 0.341

Western: Sig. = 0.559

Total: Sig. = 0.216

Most fourth grade students disagreed with this statement (67.2%) with a slightly higher ratio of students in the Kuwaiti-oriented group expressing disagreement than students in the Western-oriented group. Within the Kuwaiti group, 9% of the students agreed to the statement, compared to 18% in the Western group. The number of males who disagreed in the Kuwaiti group was higher than the number of females who disagreed, and the reverse was true for the Western group. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 11, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.36 Responses to Statement 12 of the Fourth Grade Questionnaire by Gender and Type**

12. The Big Six is easy to understand.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
	N	%	N	%	N	%	N	%	N	%
Grade 4										
Kuwaiti Males	6	16.7	5	13.9	5	13.9	4	11.1	20	55.6
Kuwaiti Females	1	2.8	5	13.9	3	8.3	7	19.4	16	44.4
Total Kuwaiti	7	19.4	10	27.8	8	22.2	11	30.6	36	100
Western Males	2	6.3	4	12.5	5	15.6	5	15.6	16	50
Western Females	2	6.3	4	12.5	4	12.5	6	18.8	16	50
Total Western	4	12.5	8	25	9	28.1	11	34.4	32	100
All Students	11	16.2	18	26.5	17	25	22	32.4	68	100

Kuwaiti: Sig. = 0.212

Western: Sig. = 0.977

Total: Sig. = 0.833

Among fourth grade students, 42.7% agreed to some extent to this statement. More students in the Kuwaiti-oriented group agreed (47.2%) than students in the Western-oriented group (37.5%) and the former group's response was stronger as well. Within the Kuwaiti group, males expressed more agreement to the statement (55%) than the females (37.5%), and in the Western group, males' and females' responses were almost identical. Chi square analyses made between the responses of students who received different types of instruction and between males and females within the same type of instruction revealed high correlations, and provided insufficient evidence to reject  $H_{03}$  and  $H_{04}$  regarding this statement, indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.37 Responses to Statement 13 of the Fourth Grade Questionnaire by Gender and Type**

13. I liked learning about the Big Six.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	9	25	3	8.3	7	19.4	1	2.8	20	55.6
Kuwaiti Females	3	8.3	5	13.9	4	11.1	4	11.1	16	44.4
Total Kuwaiti	12	33.3	8	22.2	11	30.6	5	13.9	36	100
Western Males	10	30.3	3	9.1	0	-	4	12.1	17	51.5
Western Females	1	3	1	3	6	18.2	8	24.2	16	48.5
Total Western	11	33.3	4	12.1	6	18.2	12	36.4	33	100
All Students	23	33.3	12	17.4	17	24.6	17	24.6	69	100

Kuwaiti: Sig. = 0.125

Western: Sig. = 0.001

Total: Sig. = 0.132

Among all fourth grade students, only half agreed to this statement, with equal numbers expressing uncertainty and disagreement. Although students in the Kuwaiti-oriented group expressed more agreement (55%) than students in the Western-oriented group (45%), the Chi square analyses of their responses revealed a correlation and provided insufficient evidence to reject  $H_{03}$ , indicating that there is no significant difference in the attitudes of students who received different types of instruction. In the Kuwaiti group, males had a more positive response to the statement than females but Chi square analyses revealed no significant difference in their attitudes. In the Western group, however, Chi square analyses revealed a significant difference in the attitudes of males and females, with males expressing much agreement (76%) and females expressing little agreement (7%). Therefore, with reference to this statement,  $H_{04}$  is rejected for students in the Western group.



**Table 8.38 Responses to Statement 14 of the Fourth Grade Questionnaire by Gender and Type**

14. The examples the teacher used were boring.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
	N	%	N	%	N	%	N	%	N	%
Grade 4										
Kuwaiti Males	2	5.6	1	2.8	8	22.2	9	25	20	55.6
Kuwaiti Females	0	-	3	8.3	6	16.7	7	19.4	16	44.4
Total Kuwaiti	2	5.6	4	11.1	14	38.9	16	44.4	36	100
Western Males	4	12.1	1	3	3	9.1	9	27.3	17	51.5
Western Females	3	9.1	3	9.1	2	6.1	8	24.2	16	48.5
Total Western	7	21.2	4	12.1	5	15.2	17	51.5	33	100
All Students	9	13	8	11.6	19	27.5	33	47.8	69	100

Kuwaiti: Sig. = 0.372

Western: Sig. = 0.712

Total: Sig. = 0.073

Among all fourth grade students, almost half (47.8%) disagreed with this statement and almost a quarter (24.6%) agreed. While students in the Western-oriented group had a higher level of disagreement (51.5%) compared to the Kuwaiti-oriented group (44.4%), they also agreed more (33.3%) than those in the Kuwaiti group (16.7%). Students in the Kuwaiti group expressed a high degree of uncertainty (39%). There was a correlation between males' and females' responses within both the Kuwaiti and Western groups and also between the two groups that received different types of instruction. Therefore, with reference to statement 14, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.39 Responses to Statement 15 of the Fourth Grade Questionnaire by Gender and Type**

15. Learning how to solve information problems was fun.

Group	Strongly Agree		Agree		Don't know		Disagree		Total	
Grade 4	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	10	27.8	4	11.1	3	8.3	3	8.3	20	55.6
Kuwaiti Females	3	8.3	4	11.1	7	19.4	2	5.6	16	44.4
Total Kuwaiti	13	36.1	8	22.2	10	27.8	5	13.9	36	100
Western Males	11	33.3	2	6.1	3	9.1	1	3	17	51.5
Western Females	3	9.1	2	6.1	4	12.1	7	21.2	16	48.5
Total Western	14	42.4	4	12.1	7	21.2	8	24.2	33	100
All Students	27	39.1	12	17.4	17	24.6	13	18.8	69	100

Kuwaiti: Sig. = 0.158

Western: Sig. = 0.027

Total: Sig. = 0.481

Among all fourth grade students, 56.5% agreed with this statement (39% strongly agreed) and only 19% disagreed. Responses between students in the two groups that received different types of instruction were similar. Within the Kuwaiti-oriented group, twice as many males agreed to the statement than females and within the Western-oriented group almost three times as many males agreed than females. While Chi square analyses revealed a correlation between the two groups (Kuwaiti- and Western-oriented) and between males and females within the Kuwaiti group, the analyses did not reveal a correlation between males' and females' responses in the Western group. Therefore, with reference to statement 15,  $H_{04}$  can be rejected, indicating that there is a significant difference in the attitudes of male and female Kuwaiti students who receive Western-oriented instruction for information literacy.



The Chi square analyses of the students' responses to the 15 statements in the questionnaire reveal a significant difference in the attitudes of students who received different types of instruction only in statement 8. Both groups of students disagree that "the Big Six is not helpful for solving information problems," but those in the Western group had more agreement to the statement (Table 8.32); the statistical significance between the two groups' responses is 0.018.

The Chi square analyses of the males' and females' responses within the Kuwaiti-oriented group reveal no significant differences in their responses. However, the Chi square analyses of the males' and females' responses within the Western-oriented group reveal a significant difference in four statements; these are presented in Table 8.40.

**Table 8.40 Males' and Females' Differences in the Western Group**

No	Sig	Statement	Tendency
1	.001	The Big Six is useful for solving information problems.	Boys agreed more than girls.
5	.004	I did not like learning about information problem solving.	Boys disagreed more than girls.
13	.001	I liked learning about the Big Six.	Boys agreed more than girls.
15	.027	Learning how to solve information problems was fun.	Boys agreed more than girls.

Table 8.40 shows that boys in the Western-oriented group had a significantly more positive response to the instruction than girls in the same group.

Based on these results, the researcher concludes that  $H_{03}$  cannot be rejected, i.e., there is no significant difference in the attitudes toward information problem solving and the Big Six strategy between fourth grade students who received culturally relevant instruction and those who received instruction that was not culturally relevant. The researcher also concludes that  $H_{04}$  can be rejected, i.e., there is a



significant difference in the attitudes between Kuwaiti fourth grade males and females who receive Western-oriented instruction.

Among fourth grade students, all of the statements in the questionnaire elicited at least 32% agreement, with negative responses to only two statements, both of which referred to the difficulty of the Big Six strategy. Therefore, the fourth grade students' responses to information problem solving, the Big Six strategy, the examples used in the course and the perceived gains by the students was generally very positive, regardless of the type of instruction received. Table 8.41 presents the statements that elicited at least 40% agreement among fourth grade students.

**Table 8.41 Statements with at Least 40% Agreement among Fourth Grade Students**

No.	Statement	Response
1	The Big Six is useful for solving information problems.	44.9% Strongly Agree
2	I don't think I can solve information problems.	44.9% Don't Know 43.5% Disagree
4	Learning how to solve information problems is important.	66.7% Strongly Agree
5	I did not like learning about information problem solving.	47.8% Disagree
6	I am better at solving information problems now.	42% Strongly Agree
8	The Big six is not helpful for solving information problems.	62.3% Disagree
9	The examples the teacher used were good.	69.1% Strongly Agree
11	It is not important to learn about information problem solving.	67.2% Disagree
14	The examples the teacher used were boring.	47.8% Disagree



Table 8.41 shows that, overall, students in the fourth grade had a positive attitude toward the instruction, regardless of whether it was culturally relevant or not.

In order to make a comparison between the attitudes of students instructed in the Kuwaiti-oriented group and those instructed in the Western-oriented group, statements with a p value less than 0.50 ( $p < .50$ ) were examined. Table 8.42 lists the statements to which the Western group responded more positively, as well as those to which the Kuwaiti group responded more positively. To avoid confusion, all of the statements in the table reflect a favourable position, and are listed under the group that had a more positive response.

**Table 8.42 Statements with  $p < .50$  by Groups with More Positive Response among Fourth Grade Students**

No	Sig.	Western-oriented group responded more positively	No	Sig.	Kuwaiti-oriented group responded more positively
2	.363	I think I can solve information problems.	1	.224	The Big Six is useful for solving information problems.
4	.250	Learning how to solve information problems is important.	8	.018	The Big Six is helpful for solving information problems.
10	.094	I think I can solve new information problems.	9	.143	The examples the teacher used were good.
			11	.216	It is important to learn about information problem solving.
			13	.132	I liked learning about the Big Six.
			14	.073	The examples the teacher used were good.
			15	.481	Learning how to solve information problems was fun.



Students instructed in the Western-oriented group responded more favourably to three statements with a p value less than 0.50. Since the information problems presented were similar to information problems that they face in their American-based curriculum, they could relate the instruction to their daily information needs. After the conclusion of instruction, they felt more confident to solve information problems than the students instructed in the Kuwaiti-oriented group.

Students instructed in the Kuwaiti-oriented group responded more favourably to seven statements with a p value less than 0.50. Since the information problems presented were relevant to their natal culture, they found the material interesting and enjoyable. They also valued the Big Six strategy more than the other students, perhaps because the images presented to them were more relevant to them as students. It is interesting to note that although students in the Kuwaiti-oriented group felt less confident than the students in the Western-oriented group, their achievement in information problem solving was almost 50% more than their counterparts in the Western group (see Table 8.10). And although the students in the Kuwaiti-oriented group had a more favourable response to the Big Six strategy, the students in the Western had slightly better their recall of the Big Six strategy (see Table 8.18).

Before drawing general conclusions with regard to the attitudes of students who received culturally relevant instruction as compared with those whose instruction was not culturally relevant, the responses of the eighth grade students to the 20 statements in their questionnaire are examined in the following pages. The Chi square computations and the presentation of data follow the same pattern as with the fourth grade questionnaire.



**Table 8.43 Responses to Statement 1 of the Eighth Grade Questionnaire by Gender and Type**

1. The Big Six helped me understand how to solve information problems.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	1	3.2	10	32.3	2	6.5	5	16.1	2	6.5	20	64.5
Kuwaiti Females	2	6.5	7	22.6	1	3.2	1	3.2	0	-	11	35.5
Total Kuwaiti	3	9.7	17	54.8	3	9.7	6	19.4	2	6.5	31	100
Western Males	0	-	3	16.7	3	16.7	1	5.6	3	16.7	10	55.6
Western Females	1	5.6	4	22.2	2	11.1	1	5.6	0	-	8	44.4
Total Western	1	5.6	7	38.9	5	27.8	2	11.1	3	16.7	18	100
All Students	4	8.2	24	49	8	16.3	8	16.3	5	10.2	49	100

Kuwaiti: Sig. = 0.470

Western: Sig. = 0.383

Total: Sig. = 0.314

Among eighth grade students, those in the Kuwaiti-oriented group responded more positively to statement 1, with a total of 64.5% agreement compared to 44.5% agreement from students in the Western-oriented group. However, there was no statistical significance between the Kuwaiti and Western groups. Females in the Kuwaiti group responded most favourably, with 82% agreement, and males in the Western group responded least favourably with only 30% agreement. However, there was no statistical significance between males' and females' attitudes within the groups. Therefore, with reference to statement 1, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.44 Responses to Statement 2 of the Eighth Grade Questionnaire by Gender and Type**

2. Information problem solving is an important subject to learn about.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
Grade 8	N	%	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	2	6.7	9	30	1	3.3	5	16.7	2	6.7	19	63.3
Kuwaiti Females	1	3.3	7	23.3	3	10	0	-	0	-	11	36.7
Total Kuwaiti	3	10	16	53.3	4	13.3	5	16.7	2	6.7	30	100
Western Males	2	11.1	7	38.9	1	5.6	0	-	0	-	10	55.6
Western Females	0	-	3	16.7	1	5.6	2	11.1	2	11.1	8	44.4
Total Western	2	11.1	10	55.6	2	11.1	2	11.1	2	11.1	18	100
All Students	5	10.4	26	54.2	6	12.5	7	14.6	4	8.3	48	100

Kuwaiti: Sig. = 0.139

Western: Sig. = 0.113

Total: Sig. = 0.966

Among all eighth grade students, those in the Kuwaiti-oriented group responded almost identically to those in the Western-oriented group; with 64% of students agreeing and 23% disagreeing. Among the Kuwaitigroup, males tended to agree with statement 2, although the responses were distributed. Among females in the Kuwait group, there was no disagreement and most girls agreed. Among the Western group, no males disagreed and females' responses were more evenly distributed. Analyses made between groups and between genders within groups have led the researcher is to conclude that regarding statement 2, the null hypotheses  $H_{03}$  and  $H_{04}$  cannot be rejected, indicating that there is no significant difference between the attitudes of students who received culturally relevant instruction and those who did not receive culturally relevant instruction, and that there is no difference between males and females within groups that received the same type of instruction.



**Table 8.45 Responses to Statement 3 of the Eighth Grade Questionnaire by Gender and Type**

3. My attitude toward information problems is better than it was before the course.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
Grade 8	N	%	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	1	3.2	2	6.5	9	20.9	7	22.6	1	3.2	20	64.5
Kuwaiti Females	1	3.2	6	19.4	2	6.5	1	3.2	1	3.2	11	35.5
Total Kuwaiti	2	6.5	8	25.8	11	35.5	8	25.8	2	6.5	31	100
Western Males	2	11.8	2	11.8	1	5.9	3	17.6	1	5.9	9	52.9
Western Females	1	5.9	3	17.6	3	17.6	0	-	1	5.9	8	47.1
Total Western	3	17.6	5	29.4	4	23.5	3	17.6	2	11.8	17	100
All Students	5	10.4	13	27.1	15	31.3	11	22.9	4	8.3	48	100

Kuwaiti: Sig. = 0.058

Western: Sig. = 0.344

Total: Sig. = 0.633

Among all eighth grade students, those in the Western-oriented group had a more favourable response to statement 3, with 47% having some degree of agreement. In the Kuwaiti-oriented group, 35.5% of the students didn't know, and equal numbers agreed and disagreed. Within the Kuwaiti group, females had a more favourable response, with 55% in agreement, compared to 45% of the males who didn't know and 35% disagreeing. In the Western group, females also had a slightly more favourable response, and males' responses were almost evenly distributed. Analyses made between groups and between genders within groups provide insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$  for this statement, indicating that there is no significant difference between the attitudes of students who received culturally relevant instruction and those who did not, and that there is no difference between males and females within groups that received the same type of instruction.



**Table 8.46 Responses to Statement 4 of the Eighth Grade Questionnaire by Gender and Type**

4. The homework did not help me develop information problem solving strategies.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	2	6.5	6	19.4	2	6.5	9	29	1	3.2	20	64.5
Kuwaiti Females	1	3.2	3	9.7	3	9.7	1	3.2	3	9.7	11	35.5
Total Kuwaiti	3	9.7	9	29.9	5	16.1	10	32.3	4	12.9	31	100
Western Males	3	16.7	2	11.1	1	5.6	4	22.2	0	-	10	55.6
Western Females	0	-	3	16.7	1	5.6	3	16.7	1	5.6	8	44.4
Total Western	3	16.7	5	27.8	2	11.1	7	38.9	1	5.6	18	100
All Students	6	12.2	14	28.6	7	14.3	17	34.7	5	10.2	49	100

Kuwaiti: Sig. = 0.141

Western: Sig. = 0.383

Total: Sig. = 0.843

Among all eighth grade students, responses to this statement were similar between types of instruction, with slightly more agreement among those in the Western-oriented group. In the Kuwaiti-oriented group, half of the males disagreed with the statement and only 36% of the females disagreed. In the Western-oriented group, the opposite was true, with half of the males agreeing with the statement and 38% of the females agreeing. This result indicates that students who receive culturally relevant instruction have somewhat better attitudes. However, there was no statistical significance between males' and females' attitudes within the groups. Therefore, with reference to statement 4, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.47 Responses to Statement 5 of the Eighth Grade Questionnaire by Gender and Type**

5. The information presented in this quarter was interesting.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	1	3.2	5	16.1	3	9.7	7	22.6	4	12.9	20	64.5
Kuwaiti Females	0	-	3	9.7	2	6.5	4	12.9	2	6.5	11	35.5
Total Kuwaiti	1	3.2	8	25.8	5	16.1	11	35.5	6	19.4	31	100
Western Males	0	-	2	11.1	2	11.1	2	11.1	4	22.2	10	55.6
Western Females	0	-	2	11.1	2	11.1	1	5.6	3	16.7	8	44.4
Total Western	0	-	4	22.2	4	22.2	3	16.7	7	38.9	18	100
All Students	1	2	12	24.5	9	18.4	14	28.6	13	26.5	49	100

Kuwaiti:       Sig. = 0.960  
Western:       Sig. = 0.968  
Total:         Sig. = 0.417

Among all eighth grade students, responses to this statement were very similar, with approximately 55% in both groups disagreeing. The students in the Western-oriented group, however, had stronger feelings of disagreement than those in the Kuwaiti-oriented group. A study of responses within each of the two groups shows almost identical responses between males and females. Chi square analyses made between groups and between genders within groups have led the researcher is to conclude that the null hypotheses  $H_{03}$  and  $H_{04}$  cannot be rejected with reference to statement 5, indicating that there is no significant difference between the attitudes of students who received culturally relevant instruction and those who did not receive culturally relevant instruction, and that there is no difference between males and females within groups that received the same type of instruction.



**Table 8.48 Responses to Statement 6 of the Eighth Grade Questionnaire by Gender and Type**

6. I do not feel confident to handle information problems I may face in the future.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	1	3.3	2	6.7	4	13.3	7	23.3	5	16.7	19	63.3
Kuwaiti Females	1	3.3	1	3.3	7	23.3	1	3.3	1	3.3	11	36.7
Total Kuwaiti	2	6.7	3	10	11	36.7	8	26.7	6	20	30	100
Western Males	0	-	2	11.1	2	11.1	2	11.1	4	22.2	10	55.6
Western Females	1	5.6	0	-	1	5.6	1	5.6	5	27.8	8	44.4
Total Western	1	5.6	2	11.1	3	16.7	3	16.7	9	50	18	100
All Students	3	6.3	5	10.4	14	29.2	11	22.9	15	31.3	48	100

Kuwaiti: Sig. = 0.155

Western: Sig. = 0.463

Total: Sig. = 0.257

Among eighth grade students, those who received Western-oriented instruction responded with more disagreement to statement 6, indicating that they feel more confident to handle information problems than their counterparts in the Kuwaiti-oriented group. However, there was no statistical significance between the groups. Although males in the Kuwaiti group expressed more confidence than females, and females in the Western group expressed more confidence than males, Chi square analysis revealed a correlation between genders within the groups. Therefore, with reference to statement 6, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.49 Responses to Statement 7 of the Eighth Grade Questionnaire by Gender and Type**

7. My information problem solving abilities have improved since taking the course.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
Grade 8	N	%	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	1	3.2	7	22.6	2	6.5	9	29	1	3.2	20	64.5
Kuwaiti Females	0	-	5	16.1	4	12.9	1	3.2	1	3.2	11	35.5
Total Kuwaiti	1	3.2	12	38.7	6	19.4	10	32.3	2	6.5	31	100
Western Males	2	11.1	4	22.2	0	-	2	11.1	2	11.1	10	55.6
Western Females	1	5.6	2	11.1	4	22.2	1	5.6	0	-	8	44.4
Total Western	3	16.7	6	33.3	4	22.2	3	16.7	2	11.1	18	100
All Students	4	8.2	18	36.7	10	20.4	13	26.5	4	8.2	49	100

Kuwaiti: Sig. = 0.177

Western: Sig. = 0.126

Total: Sig. = 0.406

Among eighth grade students, those in the Western-oriented group expressed more agreement to statement 7 (50%) than those in the Kuwaiti-oriented group (41.9%). However, there was no statistical difference between the groups. In the Kuwaiti group, females had a more favourable response to statement 7 than males, and the reverse was true for students in the Western group. However, the Chi square analyses revealed a correlation between males' and females' attitudes within the groups. Therefore, with reference to statement 7, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.50 Responses to Statement 8 of the Eighth Grade Questionnaire  
by Gender and Type**

8. I easily understood the material on information problem solving.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	5	16.1	3	9.7	4	12.9	5	16.1	3	9.7	20	64.5
Kuwaiti Females	2	6.5	5	16.1	1	3.2	2	6.5	1	3.2	11	35.5
Total Kuwaiti	7	22.6	8	25.8	5	16.1	7	22.6	4	12.9	31	100
Western Males	0	-	5	29.4	0	-	3	17.6	1	5.9	9	52.9
Western Females	3	17.6	2	11.8	0	-	2	11.8	1	5.9	8	47.1
Total Western	3	17.6	7	41.2	0	-	5	29.4	2	11.8	17	100
All Students	10	20.8	15	31.3	5	10.4	12	25	6	12.5	48	100

Kuwaiti: Sig. = 0.469

Western: Sig. = 0.217

Total: Sig. = 0.417

Among eighth grade students, females expressed more agreement to this statement (63% agreed to some extent) compared to males, of whom 46% agreed to some extent. Within the Kuwaiti-oriented group, females responded more favourably and within the Western-oriented group opinions were comparable. However, Chi square analyses revealed a correlation between males' and females' attitudes within the groups, and between groups in general. Therefore, with reference to statement 8, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.51 Responses to Statement 9 of the Eighth Grade Questionnaire by Gender and Type**

9. The course did not improve my ability to solve information problems.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	2	6.5	4	12.9	3	9.7	9	29	2	6.5	20	64.5
Kuwaiti Females	1	3.2	1	3.2	3	9.7	6	19.4	0	-	11	35.5
Total Kuwaiti	3	9.7	5	16.1	6	19.4	15	48.4	2	6.5	31	100
Western Males	1	5.6	2	11.1	1	5.6	4	22.2	2	11.1	10	55.6
Western Females	0	-	0	-	4	22.2	3	16.7	1	5.6	8	44.4
Total Western	1	5.6	2	11.1	5	27.8	7	38.9	3	16.7	18	100
All Students	4	8.2	7	14.3	11	22.4	22	44.9	5	10.2	49	100

Kuwaiti:       Sig. = 0.678  
Western:       Sig. = 0.275  
Total:          Sig. = 0.701

Among eighth grade students, the responses of males and females within each group were similar, with at least 50% disagreeing to some extent. Females expressed more uncertainty to the question with approximately 37% answering “don’t know.” Chi square analyses made between groups and between genders within groups have led the researcher to conclude that with reference to statement 9, the null hypotheses  $H_{03}$  and  $H_{04}$  cannot be rejected, indicating that there is no significant difference between the attitudes of students who received culturally relevant instruction and those who did not receive culturally relevant instruction, and that there is no difference between males and females that received the same type of instruction.



**Table 8.52 Responses to Statement 10 of the Eighth Grade Questionnaire by Gender and Type**

10. The examples the teacher used were interesting.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	4	12.9	7	22.6	3	9.7	5	16.1	1	3.2	20	64.5
Kuwaiti Females	4	12.9	1	3.2	3	9.7	1	3.2	2	6.5	11	35.5
Total Kuwaiti	8	25.8	8	25.8	6	19.4	6	19.4	3	9.7	31	100
Western Males	0	-	4	22.2	2	11.1	1	5.6	3	16.7	10	55.6
Western Females	1	5.6	2	11.1	0	-	2	11.1	3	16.7	8	44.4
Total Western	1	5.6	6	33.3	2	11.1	3	16.7	6	33.3	18	100
All Students	9	18.4	14	28.6	8	16.3	9	18.4	9	18.4	49	100

Kuwaiti:       Sig. = 0.254  
Western:       Sig. = 0.430  
Total:          Sig. = 0.149

Although eighth grade students who received culturally relevant instruction, i.e. the Kuwaiti group, agreed with this statement (51%) more than students whose instruction was not culturally relevant (39%), there is a correlation between the group responses. Within the Kuwaiti-oriented group, males and females had similar responses, with approximately 50 percent agreeing and 30% disagreeing. Within the Western-oriented group females had a more negative response than males, with 62.5% disagreeing to some extent, compared to the males' response of 40% disagreement. Chi square analyses show a correlation between males' and females' attitudes within the groups. Therefore, with reference to statement 10, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.53 Responses to Statement 11 of the Eighth Grade Questionnaire by Gender and Type**

11. The project about making a charter was interesting to me.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
Grade 8	N	%	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	4	12.9	1	3.2	3	9.7	6	19.4	6	19.4	20	64.5
Kuwaiti Females	0	-	3	9.7	4	12.9	2	6.5	2	6.5	11	35.5
Total Kuwaiti	4	12.9	4	12.9	7	22.6	8	25.8	8	25.8	31	100
Western Males	2	11.1	1	5.6	0	-	3	16.7	4	22.2	10	55.6
Western Females	0	-	2	11.1	2	11.1	2	11.1	2	11.1	8	44.4
Total Western	2	11.1	3	16.7	2	11.1	5	27.8	6	33.3	18	100
All Students	6	12.2	7	14.3	9	18.4	13	26.5	14	28.6	49	100

Kuwaiti: Sig. = 0.129

Western: Sig. = 0.283

Total: Sig. = 0.878

Among all eighth grade students, 55% disagreed to statement 11, with 51% of students in the Kuwaiti-oriented group disagreeing and 61% of students in the Western-oriented group disagreeing. Within each group, males' and females' responses were also similar: 20% of the males and none of the females in each group agreed strongly to the statement. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 10, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.54 Responses to Statement 12 of the Eighth Grade Questionnaire by Gender and Type**

12. I would like to know more about information problem solving.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	2	6.5	2	6.5	3	9.7	7	22.6	6	19.4	20	64.5
Kuwaiti Females	1	3.2	1	3.2	2	6.5	3	9.7	4	12.9	11	35.5
Total Kuwaiti	3	9.7	3	9.7	5	16.1	10	32.3	10	32.3	31	100
Western Males	0	-	4	22.2	3	16.7	2	11.1	1	5.6	10	55.6
Western Females	0	-	0	-	3	16.7	3	16.7	2	11.1	8	44.4
Total Western	0	-	4	22.2	6	33.3	5	27.8	3	16.7	18	100
All Students	3	6.1	7	14.3	11	22.4	15	30.6	13	26.5	49	100

Kuwaiti:       Sig. = 0.991  
 Western:       Sig. = 0.225  
 Total:         Sig. = 0.230

Among eighth grade students, 57% disagreed to this statement and only 20% agreed. Males and females in the Kuwait-oriented group had very similar responses. Males in the Western-oriented group had a more positive response to the statement, with 40% agreeing, compared to no agreement from females in this group. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 12, there is insufficient evidence to reject the null hypotheses H<sub>03</sub> and H<sub>04</sub>, indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.55 Responses to Statement 13 of the Eighth Grade Questionnaire by Gender and Type**

13. I liked learning about information problem solving.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	1	3.2	5	16.1	3	9.7	3	9.7	8	25.8	20	64.5
Kuwaiti Females	1	3.2	2	6.5	4	12.9	1	3.2	3	9.7	11	35.5
Total Kuwaiti	2	6.5	7	22.6	7	22.6	4	12.9	11	35.5	31	100
Western Males	1	5.9	3	17.6	1	5.9	3	17.6	2	11.8	10	58.8
Western Females	0	-	1	5.9	2	11.8	2	11.8	2	11.8	7	41.2
Total Western	1	5.9	4	23.5	3	17.6	5	29.4	4	23.5	17	100
All Students	3	6.3	11	22.9	10	20.8	9	18.8	15	31.3	48	100

Kuwaiti: Sig. = 0.684

Western: Sig. = 0.723

Total: Sig. = 0.692

Half of the eighth grade students responded negatively to this statement. A comparison of responses of the Kuwaiti-oriented and Western-oriented independent groups reveals nearly identical responses: approximately 50% in each group disagreed to some extent and 29% agreed. Within each group the responses of males and females were also similar. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 13, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.56 Responses to Statement 14 of the Eighth Grade Questionnaire  
by Gender and Type**

14. I did not like the course on information problem solving.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	6	20	3	10	3	10	3	10	4	13.3	19	63.3
Kuwaiti Females	3	10	1	3.3	4	13.3	3	10	0	-	11	36.7
Total Kuwaiti	9	30	4	13.3	7	23.3	6	20	4	13.3	30	100
Western Males	2	11.1	4	22.2	0	-	3	16.7	1	5.6	10	55.6
Western Females	2	11.1	2	11.1	1	5.6	1	5.6	2	11.1	8	44.4
Total Western	4	22.2	6	33.3	1	5.6	4	22.2	3	16.7	18	100
All Students	13	27.1	10	20.8	8	16.7	10	20.8	7	14.6	48	100

Kuwaiti: Sig. = 0.365

Western: Sig. = 0.590

Total: Sig. = 0.324

Among all eighth grade students, 48% agreed with this statement, with more agreement among students in the Western-oriented group (55.5%) compared to students in the Kuwaiti-oriented group (43.3%). It is interesting that while only one student in the Western group (5.6%) expressed uncertainty, seven students (23.3%) in the Kuwaiti group responded with "don't know." This may reflect a disorientation to a culturally relevant course in a school with a traditionally Western curriculum. Overall, Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 14, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.57 Responses to Statement 15 of the Eighth Grade Questionnaire by Gender and Type**

15. The material on information problem solving was hard to understand.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
Grade 8	N	%	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	4	12.9	3	9.7	2	6.5	7	22.6	4	12.9	20	64.5
Kuwaiti Females	1	3.2	2	6.5	3	9.7	4	12.9	1	3.2	11	35.5
Total Kuwaiti	5	16.1	5	16.1	5	16.1	11	35.5	5	16.1	31	100
Western Males	2	11.1	3	16.7	1	5.6	1	5.6	3	16.7	10	55.6
Western Females	0	-	3	16.7	1	5.6	1	5.6	3	16.7	8	44.4
Total Western	2	11.1	6	33.3	2	11.1	2	11.1	6	33.3	18	100
All Students	7	14.3	11	22.4	7	14.3	13	26.5	11	22.4	49	100

Kuwaiti: Sig. = 0.661

Western: Sig. = 0.772

Total: Sig. = 0.203

Among all eighth grade students, the responses were somewhat distributed, with between 14.3% and 26.5% of the students responding under each category. Males in the Western-oriented group agreed most to statement 15, with 50% agreeing to some extent, while males in the Kuwaiti-oriented group had the most disagreement to the statement (55%). Overall, the students in the Kuwaiti group thought the material was easier to understand than those in the Western group. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 10, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.58 Responses to Statement 16 of the Eighth Grade Questionnaire by Gender and Type**

16. I learned a good strategy for solving information problems during this course.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	4	12.9	4	12.9	4	12.9	5	16.1	3	9.7	20	64.5
Kuwaiti Females	2	6.5	5	16.1	2	6.5	1	3.2	1	3.2	11	35.5
Total Kuwaiti	6	19.4	9	29	6	19.4	6	19.4	4	12.9	31	100
Western Males	0	-	4	23.5	2	11.8	3	17.6	0	-	9	52.9
Western Females	1	5.9	1	5.9	4	23.5	1	5.9	1	5.9	8	47.1
Total Western	1	5.9	5	29.4	6	35.3	4	23.5	1	5.9	17	100
All Students	7	14.6	14	29.2	12	25	10	20.8	5	10.4	48	100

Kuwaiti:       Sig. = 0.604  
 Western:       Sig. = 0.246  
 Total:         Sig. = 0.542

Among all eighth grade students, response to this statement was generally positive, with the Kuwaiti-oriented group favouring the information problem solving strategy more than the Western-oriented group. Approximately 50% of the students in the Kuwaiti group agreed to some extent, compared to only 35% in the Western group. Disagreement among both groups was about 30%. Between males and females within the Kuwaiti group, responses were similar, but 50% of girls in the Western group responded with uncertainty to this statement. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 16, there is insufficient evidence to reject the null hypotheses H<sub>03</sub> and H<sub>04</sub>.



**Table 8.59 Responses to Statement 17 of the Eighth Grade Questionnaire by Gender and Type**

17. The Big Six is not a helpful strategy for solving information problems.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	1	3.3	5	16.7	3	10	6	20	4	13.3	19	63.3
Kuwaiti Females	1	3.3	0	-	3	10	3	10	4	13.3	11	36.7
Total Kuwaiti	2	6.7	5	16.7	6	20	9	30	8	26.7	30	100
Western Males	2	11.1	1	5.6	0	-	4	22.2	3	16.7	10	55.6
Western Females	1	5.6	2	11.1	1	5.6	2	11.1	2	11.1	8	44.4
Total Western	3	16.7	3	16.7	1	5.6	6	33.3	5	27.8	18	100
All Students	5	10.4	8	16.7	7	14.6	15	31.3	13	27.1	48	100

Kuwaiti:        Sig. = 0.384

Western:        Sig. = 0.673

Total:            Sig. = 0.603

Eighth grade students generally disagreed with this statement (58%), with a stronger disagreement from students in the Western-oriented group. In the Kuwaiti-oriented group, 20% expressed uncertainty to the helpfulness of the Big Six strategy, compared to 5.6% of the Western group. Between males and females in the Western group, responses were similar, but between males and females in the Kuwait group, females expressed more disagreement. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 17, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.60 Responses to Statement 18 of the Eighth Grade Questionnaire by Gender and Type**

18. I feel confident handling information problems in the future.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
Grade 8	N	%	N	%	N	%	N	%	N	%	N	%
Kuwaiti Males	5	16.1	8	25.8	3	9.7	3	9.7	1	3.2	20	64.5
Kuwaiti Females	1	3.2	1	3.2	6	19.4	2	6.5	1	3.2	11	35.5
Total Kuwaiti	6	19.4	9	29	9	29	5	16.1	2	6.5	31	100
Western Males	3	16.7	3	16.7	4	22.2	0	-	0	-	10	55.6
Western Females	4	22.2	2	11.1	1	5.6	0	-	1	5.6	8	44.4
Total Western	7	39.9	5	27.8	5	27.8	0	-	1	5.6	18	100
All Students	13	26.5	14	28.6	14	28.6	5	10.2	3	6.1	49	100

Kuwaiti: Sig. = 0.120

Western: Sig. = 0.398

Total: Sig. = 0.334

Overall, eighth grade students expressed 55% agreement to this statement, with students in the Western-oriented group having a more confident response (67.7%) than students in the Kuwaiti-oriented group (48.4%). Students who expressed the most confidence were males in the Kuwaiti group, followed by females in the Western group. Fifty-five percent of females in the Kuwaiti group expressed uncertainty to this statement. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 18, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.61 Responses to Statement 19 of the Eighth Grade Questionnaire  
by Gender and Type**

19. The examples the teacher used were boring.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	3	10	6	20	3	10	6	20	1	3.3	19	63.3
Kuwaiti Females	3	10	2	6.7	2	6.7	1	3.3	3	10	11	36.7
Total Kuwaiti	6	20	8	26.7	5	16.7	7	23.3	4	13.3	30	100
Western Males	2	11.1	3	16.7	2	11.1	1	5.6	2	11.1	10	55.6
Western Females	2	11.1	3	16.7	0	-	1	5.6	2	11.1	8	44.4
Total Western	4	22.2	6	33.3	2	11.1	2	11.1	4	22.2	18	100
All Students	10	20.8	14	29.2	7	14.6	9	18.8	8	16.7	48	100

Kuwaiti: Sig. = 0.288

Western: Sig. = 0.772

Total: Sig. = 0.760

Half of all eighth grade students agreed with this statement, with slightly more agreement among the Western-oriented group (55.5%) than the Kuwaiti-oriented group (46.7%). Approximately 1/3 of the students in these groups disagreed. The responses of males and females in each group were similar. Chi square analyses show a correlation between the two groups that received different types of instruction and between males' and females' attitudes within the groups. Therefore, with reference to statement 19, there is insufficient evidence to reject the null hypotheses  $H_{03}$  and  $H_{04}$ , indicating that the attitudes of students who received different types of instruction and of males and females within the same type of instruction are not significantly different.



**Table 8.62 Responses to Statement 20 of the Eighth Grade Questionnaire by Gender and Type**

20. Information problem solving is an important subject to learn about.

Group	Strongly Agree		Agree		Don't know		Disagree		Strongly Disagree		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Grade 8												
Kuwaiti Males	3	9.7	7	22.6	6	19.4	1	3.2	3	9.7	20	64.5
Kuwaiti Females	1	3.2	5	16.1	3	9.7	0	-	2	6.5	11	35.5
Total Kuwaiti	4	12.9	12	38.7	9	29	1	3.2	5	16.1	31	100
Western Males	7	38.9	3	16.7	0	-	0	-	0	-	10	55.6
Western Females	1	5.6	1	5.6	2	11.1	2	11.1	2	11.1	8	44.4
Total Western	8	44.4	4	22.2	2	11.1	2	11.1	2	11.1	18	100
All Students	12	24.5	16	32.7	11	22.4	3	6.1	7	14.3	49	100

Kuwaiti: Sig. = 0.909

Western: Sig. = 0.022

Total: Sig. = 0.073

The responses of eighth grade students to statement 20 are similar to their responses to statement 2, which is identical. Among all students, approximately 57% agreed to the statement and 20% disagreed. Students in the Western-oriented group tended to express more agreement (66.6%) and students in the Kuwaiti-oriented group expressed more uncertainty (29%) than those in the other group (11%). A Chi square analysis of the responses showed a correlation between the two groups. The responses of males and females in the Kuwaiti group were similar and a Chi square analysis showed a high correlation. However, males' and females' responses in the Western-oriented group differed in that all males agreed to some extent and females' responses were more evenly distributed. A Chi square analysis of responses in the Western group revealed that there is a significant difference (0.022) in the attitudes of males and females towards this statement.



The Chi square analyses of the students' responses to the twenty statements in the questionnaire reveal a correlation between the attitudes of students who received culturally relevant instruction and those who did not. Therefore, the researcher concludes that  $H_{03}$  cannot be rejected, i.e., there is no significant difference in the attitudes towards information problem solving and the Big Six strategy between eighth grade students who received culturally relevant instruction and those who received instruction that was not culturally relevant. Furthermore, the Chi square analyses of the students' responses to the twenty statements in the questionnaire reveals a correlation between the attitudes of males and females within the same type of instruction *except* for statement 20 (information problem solving is an important subject to learn about). A statistically significant difference did not exist in 39 of 40 analyses between the attitudes of males and females who received the same type of instruction, representing a 0.975 frequency of correlation. For this reason, the researcher concludes that  $H_{04}$  cannot be rejected, i.e., there is no significant difference in the test scores and attitudes between eighth grade males and females within the same type of instruction

There were five statements that elicited agreement among at least 33% of the eighth grade students, regardless of the type of instruction they received. These results are presented in Table 8.63.

**Table 8.63   Statements with at Least 33% Agreement  
among Eighth Grade Students**

No.	Statement	Response
1	The Big six helped me understand how to solve information problems.	49% Agree
2	Information problem solving is an important subject to learn about.	54% Agree
4	The homework did not help me develop information problem solving strategies.	34.7% Disagree
7	My information problem solving abilities have improved since taking the course.	36.7% Agree
9	The course did not improve my ability to solve information problems.	44.9% Disagree



This agreement among eighth grade students is fairly positive to information problem solving, the Big Six strategy, the homework completed during the course and the perceived gains by the students, regardless of the type of instruction received.

In order to make a comparison between the attitudes of students instructed in the Kuwaiti-oriented group and those instructed in the Western-oriented group, statements with a p value less than 0.50 ( $p < .50$ ) were examined. Table 8.64 lists the statements to which the Western group responded more positively, as well as those to which the Kuwaiti group responded more positively. To avoid confusion, all of the statements in the table reflect a favourable position, and are listed under the group that had a more positive response.

**Table 8.64 Statements with  $p < .50$  by Groups with More Positive Response among Eighth Grade Students**

No	Sig.	Western-oriented group responded more positively	No	Sig.	Kuwaiti-oriented group responded more positively
6	.257	I feel confident to handle information problems I may face in the future.	1	.314	The Big Six helped me understand how to solve information problems.
7	.406	My abilities to solve information problems have improved.	5	.417	The information presented was interesting
8	.417	I easily understood the material on information problem solving.	10	.149	The examples the teacher used were interesting.
12	.230	I would like to know more about information problem solving.	14	.324	I liked the course on information problem solving.
18	.334	I feel confident handling information problems in the future.	15	.203	The material on information problem solving was easy to understand.
20	.073	Information problem solving is an important subject to learn about.			



Students instructed in the Western-oriented group responded more favourably to six statements with a p value less than 0.50. The researcher assumes that since the information problems presented were similar to information problems that they face in their American-based curriculum, they could relate the instruction to their daily information needs. After the conclusion of instruction, they felt more confident, more able and more interested in information problem solving than the students instructed in the Kuwaiti-oriented group.

Students instructed in the Kuwaiti-oriented group responded more favourably to five statements with a p value less than 0.50. Since the information problems presented were relevant to their natal culture, they found the material interesting and enjoyable. They also valued the Big Six strategy more than the other students, perhaps because the images presented to them were more relevant to their experiences. It is interesting to note that although students in the Kuwaiti-oriented group felt less confident than the students in the Western-oriented group, their achievement in information problem solving was nearly equal (see Table 8.11) and their recall of the Big Six strategy was significantly better (see Table 8.19).

In general, the fourth grade students' attitudes toward instruction for information literacy was more positive than the eighth grade students' attitudes. Among eighth grade students, there were only five statements from 20 that elicited agreement among at least 33% of the students, all of them favourable to the course. Among fourth grade students, all of the statements in the questionnaire elicited at least 32% agreement, with negative responses to only two statements, both of which referred to the difficulty of the Big Six strategy. Therefore, the fourth grade students' responses to information problem solving, the Big Six strategy, the examples used in the course and the perceived gains by the students were generally very positive, regardless of the type of instruction received.



## Conclusion

The purpose of this study was to ascertain the effects of cultural relevance on student achievement and attitudes for information literacy instruction among fourth and eighth grade Kuwaiti students. Participants in the study received instruction for information literacy that was either culturally relevant, i.e., Kuwaiti-oriented, or not culturally relevant, i.e., Western-oriented. At the conclusion of instruction, the students' ability to respond to an information problem was tested, as well as their recall of the Big Six strategy. In addition, their attitudes toward information problem solving, the Big Six strategy and the classroom instruction were measured with a questionnaire.

The four hypotheses tested in this study, stated in null terms, are:

H<sub>01</sub>: There is no significant difference in the mean achievement scores in information problem solving between students who received culturally relevant and those who received instruction that was not culturally relevant.

H<sub>02</sub>: There is no significant difference in the mean final test scores between students whose Big Six instruction was culturally relevant and those whose Big Six instruction was not culturally relevant.

H<sub>03</sub>: There is no significant difference in the attitudes towards information problem solving and the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant

H<sub>04</sub>: There is no significant difference in the test scores and attitudes between males and females within the same type of instruction.

A priori level of significance was established at the  $p \leq 0.05$  level, and a null hypothesis was rejected when the p value was less than or equal to 0.05. The results of the analyses of both the students' performance on tests and their attitudes are presented below as they relate to each of the hypotheses tested.

**H<sub>01</sub>: There is no significant difference in the mean achievement scores in information problem solving between students who received culturally relevant and those who received instruction that was not culturally relevant.**

1. Among fourth grade students, those who received culturally relevant instruction had approximately 50% higher achievement than their counterparts in the group whose instruction was not culturally relevant. An analysis of equality of means using the independent samples *t* test resulted in a statistical significance of 0.003.
2. Among males, those who received culturally relevant instruction had approximately 50% higher achievement than their counterparts in the group whose instruction was not culturally relevant. An analysis of equality of means using the independent samples *t* test resulted in a statistical significance of 0.023.

**H<sub>02</sub>: There is no significant difference in the mean final test scores between students whose Big Six instruction was culturally relevant and those whose Big Six instruction was not culturally relevant.**

1. An analysis of variance for the final test scores among the students who participated in the study resulted in a statistical significance of 0.006, indicating that those who received instruction that was culturally relevant performed significantly better on the final test than those whose instruction was not culturally relevant.
2. Confirming the results above, an analysis of equality of means using the independent samples *t* test resulted in a statistical significance of 0.021. Therefore, among the students who participated in the study, those who received culturally relevant instruction had higher achievement on the final test than their counterparts in the group whose instruction was not culturally relevant.
3. Among eighth grade students, those who received culturally relevant instruction had a higher mean final test score than their counterparts in the group that received instruction that was not culturally relevant. An analysis of equality of means using the independent samples *t* test resulted in a statistical significance of 0.002.



4. Among males, those whose instruction was culturally relevant scored approximately 85% more on the final test than the males in the group whose instruction was not culturally relevant. An analysis of equality of means using the independent samples  $t$  test resulted in a statistical significance of 0.000.

**H<sub>03</sub>: There is no significant difference in the attitudes towards information problem solving and the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.**

1. Among fourth grade students, there is no significant difference in the attitudes towards information problem solving and the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.
2. Among eighth grade students, there is no significant difference in the attitudes towards information problem solving and the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant

**H<sub>04</sub>: There is no significant difference in the test scores and attitudes between males and females within the same type of instruction.**

1. Among students in the group whose instruction was not culturally relevant, i.e., the Western-oriented group, females achieved a mean score almost double the males' mean score. An analysis of equality of means using the independent samples  $t$  tests resulted in a statistical significance of 0.002.
2. Among fourth grade students whose instruction was not culturally relevant, i.e., the Western-oriented group, males had a significantly better attitude toward instruction for information literacy than females in four out of 15 statements.

In addition, the following observations were made:

1. The eighth grade students' mean pre-test scores (21.20) were only slightly higher than the fourth grade students' mean post-test scores (17.97), indicating that seven 40-minute lessons at the fourth grade level can boost information



literacy nearly to the level of eighth grade students who did not have similar instruction.

2. Fourth grade students had a more positive attitude toward the course on information literacy than eighth grade students. Fourth grade students responded with at least 32% agreement on all statements, and 13 from the 15 statements were a positive response to the course. Eighth grade students responded with at least 33% agreement on five from 20 statements; each was a positive response to the course.

The analyses made between independent groups of students following instruction for information literacy lead the researcher to reject the null hypotheses  $H_{01}$ ,  $H_{02}$  and  $H_{04}$ , and to accept their alternatives:

*H<sub>a1</sub>: There is a significant difference in the mean achievement scores in information problem solving between students who received culturally relevant instruction and those who received instruction that was not culturally relevant. This alternative hypothesis is applicable to younger students and to males.*

*H<sub>a2</sub>: There is a significant difference in the mean final test scores between students whose Big Six instruction was culturally relevant and those whose Big Six instruction was not culturally relevant. This alternative hypothesis is applicable to all students in the study, but especially to older students and to males.*

*H<sub>a4</sub>: There is a significant difference in the test scores and attitudes between males and females within the same type of instruction. This alternative hypothesis is applicable to Kuwaiti students who receive Western-oriented instruction: females achieved significantly more than males in information problem solving ability and fourth grade males had significantly better attitudes than fourth grade females.*



Furthermore, the analyses made between independent groups of students following instruction for information literacy failed to produce sufficient evidence to reject the null hypotheses  $H_{03}$ :

**$H_{03}$ : There is no significant difference in the attitudes towards information problem solving and the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.**

The following chapter provides the summary and conclusions drawn from the study as well as suggestions for further research.



## **Chapter Nine**

### **Summary, Conclusions and Recommendations**

#### **Summary**

Despite increases in qualitative and quantitative aspects of education in Kuwait since the discovery of oil in 1938, public education in Kuwait is still highly traditional at all levels in the sense that rote learning and memorisation are central to the learning process. Many Kuwaiti parents, being dissatisfied with public education, have enrolled their children in private, English-medium schools where students are encouraged to think critically and creatively and engage in problem-solving. However, because the curricula of these schools are imported from Western countries, they lack cultural relevance.

Instruction for information literacy that is also culturally relevant can help bridge the gaps inherent in these approaches to education. It can outreach the boundaries imposed by the educational systems in Kuwait and allow students to explore current, controversial or local issues that are either not included, or covered only superficially, in their textbooks. The effective role of Kuwaiti youth in the development of their country will depend, to a large extent, on their ability to access information efficiently and effectively, evaluate information critically and competently, and use information accurately and creatively. However, they must be information literate not only in the general sense of the term but also in the context of their own culture.

This study has been undertaken to identify the components of an instructional programme for information literacy that is culturally relevant to Kuwaiti students and to test the effect of cultural relevance in information literacy instruction. The basic components of a modern instructional programme of information literacy that is culturally relevant for Kuwaiti students are four:

- It exhibits the general characteristics of culturally relevant education
- It reflects the culture of Kuwait on its various levels



- It presents a general process of information problem solving and teaches library and research skills within that framework
- It is planned and taught in collaboration with teachers and integrated into the curriculum.

Having identified the components of such a programme through the literature review, the researcher formulated two sets of lesson plans, i.e., Western-oriented and Kuwaiti-oriented, to use for independent groups of students in an experiment of comparative instruction. The aims of instruction for both groups were basic levels of proficiency as described in *Information Literacy Standards for Student Learning* and the main vehicle of instruction was the Big Six™ information problem solving strategy. The only differences in instruction between groups were the images in the Big Six transparencies, the examples used in class to discuss various information problems and the corresponding images that represented the examples.

Before the onset of instruction, students were given a pre-test to measure their information problem solving ability. After the completion of instruction, students were given the same as a post-test, as well as a test designed to measure their recall of the Big Six strategy and a questionnaire to measure their attitude toward information problem solving, the Big Six strategy and the materials used during the course. The students' achievement between the pre- and post-test, and their knowledge of the Big Six strategy were analysed with ANOVA and independent samples *t* tests, and responses on the attitude questionnaire were measured with Chi square.

A statistical analysis of the responses of students who participated in the study revealed that there is a significant difference in the recall of the Big Six strategy between students who received culturally relevant instruction and those whose instruction was Western-oriented. Although applicable to all students in the study, this result was particularly relevant to eighth grade students and to males. In addition, there is a significant difference in the achievement of information literacy proficiency between fourth grade students who received culturally relevant instruction and those whose instruction was Western-oriented, and between males



who received culturally relevant instruction and those whose instruction was Western-oriented. Furthermore, the data analysis showed that among students who received Western-oriented instruction, females achieved significantly more (almost twice as much) information literacy proficiency than males.

Therefore, while the data analysis did not indicate a significant difference in the attitudes towards information problem solving and the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was Western-oriented, it did support the following hypotheses:

1. There is a significant difference in the mean achievement scores in information problem solving between students who received culturally relevant instruction and those who received instruction that was not culturally relevant.
2. There is a significant difference in the mean final test scores, which measured recall of the Big Six strategy, between students whose instruction was culturally relevant and those whose instruction was not culturally relevant.
3. There is a significant difference in the test scores and attitudes between males and females within the same type of instruction.

The data analysis has indicated that cultural relevance has a significant effect on the academic achievement of Kuwaiti students and that males respond less favourably than females to instruction that is Western-oriented.

## **General Conclusions**

This study was undertaken in consideration of several objectives related to instruction for information literacy for Kuwaiti students. The conclusions that relate to each of the objectives specified in Chapter One are discussed below.

1. *To define culturally relevant education.* Culturally relevant education can be defined as a “pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge,



skills and attitudes.”<sup>1</sup> The review of the literature provided some evidence that culturally relevant education is more effective than that which is not culturally relevant, and the results of the experiment of comparative instruction offer confirming evidence, particularly in the area of academic achievement. The data analysis indicates that Kuwaiti students in a school with an American base curriculum perform significantly better when cultural referents are inserted into the classroom material. Whether these results apply to other groups of students, such as Kuwaiti students in Arabic schools, or other minority or majority groups of students, is a subject that warrants further research.

2. *To provide a conceptual framework for culturally relevant education for Kuwaiti youth.* The culture of Kuwait is a reflection of its unique national history, its regional identity with other Gulf countries, its shared language, culture and history with Arabs, its strong bases in the Islamic religion, and its struggle as a developing country. While these are not Kuwait’s only characteristics in a world of increasing international awareness and co-operation, they should not be ignored when alternatives to traditional education are offered in the country. This study provides a framework for culturally relevant education for Kuwaiti students and offers evidence that references to social, political and historical culture in the curriculum increase student achievement.
3. *To assess the current best practice of instruction for information literacy.* As determined in the literature review, the current trend in information literacy instruction is to teach students the information problem solving process in generalisable steps. This general process of information problem solving offers opportunities to teach specific information and research skills within that framework. Furthermore, information literacy programmes are increasingly being integrated into the school curriculum and are being planned and taught in collaboration with teachers rather than being conducted in isolation by a single teacher-librarian. Well-stocked and staffed libraries and resource centres, as well as the support of teaching and administrative staff in schools are crucial to the implementation of such a programme.



4. *To review instruction for information literacy offered in the various educational levels in Kuwait.* Library or information skills instruction in Kuwait occurs primarily in English-medium schools, where instruction is usually integrated throughout the curricula over several grade levels. Some traditional Arabic schools offer extracurricular activities in the library and credit unit Arabic schools require all secondary school students to take a year-long course about libraries and research. Library and information skills instruction is also offered at the post-secondary level, but only as an elective course or as part of English language courses. Therefore, it is possible that some citizens have been through the educational system in Kuwait without having any experience in a library. However, the fact that all schools have a library and that there are school library standards and guidelines in place suggests a strong potential for the imminent development of information literacy programmes at all levels of education and in all types of schools.
5. *To determine if instruction for information literacy that is culturally relevant elicits a higher learning response in Kuwaiti children as opposed to instruction that is not culturally relevant.* The analysis of the data generated from the students' responses to achievement and recall tests indicate that, in general, there is a significant difference in the mean achievement scores in information problem solving and the recall of the Big Six strategy between students who received culturally relevant instruction and those who received instruction that was not culturally relevant. Examined separately, males' scores were significantly higher in the group that received culturally relevant instruction, while females responded equally well to both types of instruction. These results apply to Kuwaiti students in the fourth and eighth grades (ages 9-11 and 13-15, respectively) who attend an English-medium school with an American base curriculum. Whether these results apply to other populations of students, such as Kuwaiti students in Arabic schools, or other minority or majority groups of students, is a subject that warrants further research. A more detailed explanation of the results of this experiment of comparative instruction is presented in the following section of this chapter.



6. *To provide a basis for developing instruction for information literacy in Kuwait.*

The literature review described the current best practice of instruction for information literacy as a process approach that is integrated into the overall school curriculum. Research by Dewees<sup>2</sup> indicates that a process-oriented approach is superior to a traditional source-based approach, and research by Nolan<sup>3</sup> indicates that the integration of library research skills into the classroom curriculum is superior to teaching the skills in isolation. These research findings, coupled with the results of this study, provide a strong basis for the development of instruction for information literacy in Kuwait at various levels of education and at various types of schools.

7. *To provide a basis for recommending changes within general education in Kuwait.*

As a broad objective of this study, suggestions for changes within general education in Kuwait are offered for several reasons that were discussed in this study, among them: the advent of the information revolution that is characterised by the increase in the availability of information and the changes in its storage and dissemination; the recognition that students must become skilful consumers and producers of information to thrive in our information-based world; and the current trends in instruction for information literacy that stress the importance of resource-based learning, collaborative teaching, a broad range of library and information skills that are integrated throughout the whole-school curriculum, and the importance of well stocked libraries and information centres that are central to the learning process. The implementation of modern programmes for information literacy necessitate a system of education where rote learning and memorisation are not central to the learning process, and where exams do not dominate the evaluation of student success.

### **Conclusions Related to the Experiment of Comparative Instruction**

The analysis of data generated from the experiment of comparative instruction seem to justify the following conclusions:



*1. Instruction for information literacy that is culturally relevant elicits a higher learning response in Kuwaiti youth as opposed to instruction with identical general aims that is not culturally relevant.*

This conclusion is supported by the following evidence:

- a. The results of the ANOVA for the post-test, which measured information problem solving ability, show a significantly higher mean score among students who received culturally relevant instruction (Table 8.7).
- b. The results of the ANOVA for the final test, which measured recall of the Big Six strategy, show a significantly higher mean score among students who received culturally relevant instruction (Table 8.8).
- c. The results of *t* tests for achievement in information problem solving show a significantly higher mean score among fourth grade students who received culturally relevant instruction (Table 8.10).
- d. The results of *t* tests for achievement in information problem solving show a significantly higher mean score among males who received culturally relevant instruction (Table 8.12).
- e. The results of *t* tests for recall of the Big Six strategy show a significantly higher mean score among students who received culturally relevant instruction (Table 8.17).
- f. The results of *t* tests for recall of the Big Six strategy show a significantly higher mean score among eighth grade students who received culturally relevant instruction (Table 8.19).
- g. The results of *t* tests for recall of the Big Six strategy show a significantly higher mean score among males who received culturally relevant instruction (Table 8.20).

The superior ability in information problem solving and recall of the Big Six strategy resulted when the image in the Big Six transparencies were altered and when Western-oriented examples were substituted with culturally relevant (Kuwaiti-oriented) examples of information problems. The researcher wishes to stress, however, that these results were achieved despite the fact that many components of culturally relevant education that were identified by this study were not included in curriculum design (e.g., parental involvement, bilingualism) and that instruction for information literacy was not integrated into the general school curriculum as is the current best practice. Furthermore, these results were achieved after approximately



4.6 hours of instruction. Therefore, the researcher believes that greater improvement in achievement would have resulted if elements of culturally relevant instruction were applied more fully, if instruction were integrated into the curriculum, and if instruction were carried out over a longer period of time.

2. *There is a correlation between the attitudes of students who receive culturally relevant instruction for information literacy and those whose instruction was not culturally relevant.*

This conclusion is supported by the following evidence:

- a. Chi square analyses of the responses of fourth grade students revealed a correlation in the attitudes of students who received different types of instruction with regard to all 15 statements except one (Table 8.32).
- b. Chi square analyses of the responses of eighth grade students revealed a correlation in the attitudes of students who received different types of instruction with regard to all 20 statements except one (Table 8.62).

Although there was a statistical correlation in attitudes of the students who received different types of instruction, two general tendencies were noted by the researcher: students in the Kuwaiti-oriented group had more positive attitudes to the Big Six strategy and enjoyed instruction more than their counterparts in the Western-oriented group. However, students in the Western-oriented group felt more strongly about the importance of information problem solving and their perceived abilities in that area (Tables 8.42 and 8.64). Therefore, while students in the Western-oriented group felt more capable to solve information problems, they were, in fact, less capable in both information problem solving ability and recall of the Big Six strategy.

Although culturally relevant instruction seems to promote academic achievement and foster positive attitudes toward instruction, Kuwaiti-oriented instruction in an American school setting had a less positive effect in the students' confidence levels and perceived importance of the subject matter compared to students who received Western-oriented instruction. In light of these findings, the researcher feels that some discussion of Western-oriented information problems should be included in instruction that is primarily culturally relevant when students are enrolled in Western-type schools. Hence, the *total* culture of the student would be addressed, including his foreign school culture.



3. *Kuwaiti females respond equally well to instruction that is culturally relevant and to that which is Western-oriented.*

This conclusion is supported by the following evidence:

- a. The results of *t* tests for achievement in information problem solving among females shows nearly equal mean scores among those who received culturally relevant instruction and those whose instruction was Western-oriented (Table 8.13).
- b. The results of *t* tests for recall of the Big Six strategy among females shows nearly equal mean scores among those who received culturally relevant instruction and those whose instruction was Western-oriented (Table 8.21).

4. *Kuwaiti males respond better to instruction that is culturally relevant than to that which is Western-oriented.*

This conclusion is supported by the following evidence:

- a. The results of *t* tests for achievement in information problem solving among males show a 50% higher mean score for those who received culturally relevant instruction as opposed to that which was Western-oriented (Table 8.12).
- b. The results of *t* tests for recall of the Big Six strategy among males show that the mean score of those who received culturally relevant instruction is almost double that of males whose instruction was Western-oriented (Table 8.20).

In addition, among all students who participated in the study, females achieved approximately 40% more than males in information problem solving ability, which is a statistically significant difference (Table 8.14). The researcher would like to note that the females who participated in the study exhibited more attentiveness and self-discipline in the classroom than the males, regardless of orientation, and that this may have contributed to the difference in academic achievement. However, it does not explain why females performed equally well, regardless of the orientation of the instruction, and why males in the Kuwaiti-oriented group performed significantly better than their counterparts in the Western-oriented group. The researcher feels that these findings raise questions that should be addressed with further research.



## **Recommendations**

The purpose of this study was to determine if instruction for information literacy that is culturally relevant elicits a higher learning response in Kuwaiti youth as opposed to instruction with identical general aims that is not culturally relevant. It was felt that if culturally relevant instruction did *not* elicit a higher learning response among Kuwaiti youth in Western-type schools, and that no significant difference in their achievement and attitudes existed, then an argument could be presented for an international curriculum for instruction for information literacy, and that the concomitant library and research skills could be considered international or universal in character. However, the results of this study have indicated that culturally relevant instruction for information literacy *does* elicit higher learning responses in Kuwaiti youth enrolled in a school with an American base curriculum, especially with regard to male students. Based on this result and on the review of the literature presented in chapters one through five, the following recommendations for changes in practice and policy in Kuwait, as well as for further research, are offered.

### **Recommendations Influencing Policy and Practice in Kuwait**

Considering the international consensus reported by Lonsdale<sup>4</sup> that “information skills acquisition requires a developmental programme, following the continuum of education from the kindergarten level through the intermediate school to the secondary level and thereafter into tertiary education,” and that “skills should pervade the curriculum and be a compulsory element of individual subject fields rather than comprise an ad hoc course conducted in isolation by the library,” the researcher offers the following recommendations:

1. With regard to instruction for information literacy in English-medium schools in Kuwait, the researcher recommends that a process approach to information problem solving is featured in instructional units and, furthermore, that instruction is integrated throughout the curriculum more comprehensively than it is at present. This recommendation is made based on related research by



Dewees<sup>5</sup> and Nolan<sup>6</sup> and on the responses generated from the questionnaire distributed to local schools, which indicated that many English-medium schools do not have a comprehensive or integrated programme of information literacy instruction, and that all but one of the responding schools indicated that they do not use a process approach to instruction. Furthermore, based on the results of the present study, the researcher recommends the inclusion of culturally relevant material in programmes of instruction for information literacy where possible.

2. With regard to instruction for information literacy in Arabic schools in Kuwait, it is highly recommended that the development of resource based education is undertaken and that a more comprehensive programme of instruction for information literacy, one that incorporates a modern process approach and addresses information literacy rather than library skills, is formulated and enforced by the Ministry of Education. The implementation of this recommendation would affect the policies of the Ministry of Education and the schools under its patronage, particularly in the area of providing school library media centres with an adequate supply of suitable materials, and sufficient numbers of trained staff. In practice, the roles and responsibilities of school library media specialists in Kuwait should develop to include collaborating with teachers in the educational process and participating in the instruction of Kuwaiti youth in the area of information literacy. Once implemented, the recommended courses should offer a process approach and incorporate culturally relevant material.
3. With regard to tertiary education in Kuwait, it is recommended that a general course in information literacy is required for all freshmen and that subject-oriented courses in information literacy are offered according to students' majors. This recommendation is made based on the research about the provision of instruction for information literacy in Kuwait in tertiary education, which indicated that exposure to library or information skills is confined primarily to a single elective course in PAAET and to English language courses in KU. The implementation of this recommendation would affect the policies of the Ministry of Higher Education and the institutes under its patronage regarding the course



requirements for enrolled students. In practice, the course offerings at institutes of higher education should develop to include instruction in information literacy, and the faculty of these institutes would require sufficient numbers of trained teaching staff and librarians. Once implemented, the recommended courses should offer a process approach and incorporate culturally relevant material.

### **Recommendations for Further Research**

4. A similar study should be undertaken in the field of information literacy to determine the effects of culturally relevant instruction on Kuwaiti youth at different educational levels, e.g. first grade and twelfth grade. Such a study is recommended due to the variations in achievement between fourth and eighth grade students and between males and females in the present study. The results of such a study, coupled with the findings of the present study, might indicate that culturally relevant education is more effective with certain age groups, and might confirm or disconfirm the findings of this study pertaining to the difference between males' and females' achievement, particularly in the Western-oriented groups.
5. A similar study should be undertaken either in the field of information literacy or in any other subject area to further determine the general effects of culturally relevant instruction. The researcher feels that such a study is important to validate the conclusion of this study that culturally relevant instruction elicits a higher learning response than instruction with identical general aims that is not culturally relevant. Such a study would have value to educationalists in general and to those who teach culturally different indigenous or minority groups, in particular.
6. An investigation should be undertaken with regard to the differences, or lack thereof, in achievement between Western-oriented and Kuwaiti-oriented groups of the same gender. Such research might indicate, for example, that differences in learning styles are a factor contributing to student achievement. The



researcher feels that such research on culturally different indigenous or minority groups could prove useful to educators of such students.



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## Appendix 1

### Library Skills Scope and Sequence

The following pages present two scope and sequence documents, reproduced from Eisenberg and Berkowitz's *Information Problem Solving*.<sup>\*</sup> The first represents the curriculum of a traditional source-based library instruction program. The second has been revised within a Big Six Skills framework while retaining original grade designations.

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<sup>\*</sup>Eisenberg, Michael B. and Robert E. Berkowitz. *Information Problem Solving: The Big Six Skills Approach to Library and Information Skills Instruction*. Norwood, NJ: Ablex Publishing Corporation, 1990, pp. 48-55.



# Typical Library Skills Curriculum

	K	1	2	3	4	5	6	7	8	9	10	11	12
<b>Organization of the LMC</b>		Includes orientation to the LMC											
Layout of the LMC	I	I	I	R	R	R	R	E	E	E	E		
Shelf Arrangement		I	I	I	R	R	R	E	E	E	E		
Reference Section				I	I	R	R	R	E	E	E	E	E
Nonfiction				I	I	R	R	E	E	E	E		
Fiction			I	I	R	R	R	E	E	E	E		
Biography				I	I	R	R	E	E	E	E		
Periodicals		I	I	R	R	R	R	E	E		E	E	R
AV Materials		I	I	R	R	R	R	E	E	E	E	E	R
Equipment		I	I	R	R	R	R	E	E	E	E	E	R
Computers			I	I	R	R	R	E	E	E	E	E	E
<b>Library Classification System</b>		Includes organization and arrangement											
Catalog				I	I	R	R	R	E	E	E	E	
Dewey Decimal System				I	I	R	R	R	E	E	E	E	
Subject Headings				I	I	R	R	R	E	E	E	E	
<b>Library Citizenship</b>		Includes policies, procedures, & expectations											
Circulation	I	I	I	R	R	R	R	E	E	E	E	R	R
Use Areas	I	I	I	R	R	R	R	E	E	E	E	R	R
Public Library			I	I	R	R	R	E	E	E	E	R	R
Academic Libraries										I	R	E	E
<b>Materials Use</b>													
Parts of a Book	I	I	R	R	R	R	E	E	E		E		
Using Back-of-the-Book Indexes			I	I	R	R	E				E		
Using Periodical Indexes						I	I	E	E	R	E	E	
Searching via Computer								I	I	R	E	E	E
Primary/Secondary Sources						I	I	I	R	R	E	E	
Using Equipment			I	I	R	R	R	E	E	R	E		E
<b>Research Skills</b>													
Selecting a Topic							I	I	E	E	E	E	E
Using Appropriate Sources							I	I	R	E	E	E	E
Taking Notes							I	I	R	R	E	E	E
Footnotes								I	R	E	E	R	E
Bibliography							I	R	R	E	E	R	E

NOTE: ASSUMES K-6 ELEMENTARY, 7-8 OR 7-9 MIDDLE, 9-12 OR 10-12 HIGH SCHOOL

	K	1	2	3	4	5	6	7	8	9	10	11	12
<b>Types of Resources</b>													
Information Books			I	I	R	E	E	E	E	R	E		
Indexes						I	I	E	E	E	E	E	
Dictionaries		I	I	R	R	R	R	E	R	R	E	R	
Encyclopedias			I	I	R	R	E	E	R		E		
Atlases			I	I	R	R	E	E					
Almanacs					I	I	R	E	R	R	E		
Thesauri						I	I	I	R	R	E	E	
Vertical File		I	I	R	R	R	R	E	R	R	E	R	
Microform								I	R	R	E	E	
AV Software		I	I	R	R	R	R	E	E	R	E	R	
Computer Software			I	I	R	R	R	E	R	R	E	R	
<b>Special Subject Sources</b>													
Biographical Sources						I	I	I	R	R	E	E	
Current Events Sources						I	I	I	R	R	E	E	
Literary Sources							I	I	R	R	E	E	E
Arts Sources									I	R	E	E	E
Career Sources								I	R	R	E	E	E
<b>Literature Appreciation</b>													
Folk Tales	I	I	R	R	R	R	R	E	E	E	E		
Picture Books	I	R	R										
Poetry	I	I	R	R	R			E	E	E	E	E	E
Plays					I	I	R	E	R	R	E	E	E
Mythology	I	I	R	R	R	R	R	E	E	E	E	E	E
Biography				I	R	R	E	R	R	E	R	R	
Fiction				I	I	R	E	E	E	R	R	E	E
Literary Criticism								I	R	R	E	E	E

I = INSTRUCT, R=REVIEW/REINFORCE, E = EXPAND



# Revised Library & Information Skills Curriculum

	K	1	2	3	4	5	6	7	8	9	10	11	12
<b>TASK DEFINITION</b>													
1.1 Define the Problem													
Information Problems			I	I	R	R	R	E	E	R	E	R	R
Information Needs					I	I	R	R	R	R	E	R	R
Selecting a Topic					I	I	R	R	E	E	E	E	E
Literature Appreciation	I	I	R	R	R	R	R	E	R	R	E	R	
1.2 Identify Information Requirements													
Analyzing Assignments		I	I	I	R	R	R	E	E	E	E	R	R
The Big Six Skills	I	I	R	R	R	R	R	E	E	R	E	R	R
<b>INFORMATION SEEKING STRATEGIES</b>													
2.1 Determine Range of Sources													
Types of Resources													
Categories - Text/Human	I	I	I	I	R	R	R	E	E	E	E	E	E
Brainstorming	I	I	I	I	R	R	R	E	E	E	E	E	E
Primary/Secondary Sources						I	I	I	R	R	E	E	
Text Resources													
Information (NF) Books			I	I	R	E	E	E	E	R	E		
Dictionaries		I	I	R	R	R	R	E	R	R	E	R	
Encyclopedias			I	I	R	R	E	E	R		E		
Indexes						I	I	E	E	E	E	E	
Other Reference Sources			I	I	R	R	E	E					
Resource File		I	I	R	R	R	R	E	R	R	E	R	
Periodicals								I	R	R	E	E	
Media		I	I	R	R	R	R	E	E	R	E	R	
Computer Software			I	I	R	R	R	E	R	R	E	R	
Special Subject Sources						I	I	I	R	R	E	E	
Literature	I	I	R	R	R	R	R	E	E	E	E	E	E
Literary Criticism								I	R	R	E	E	E
External Sources													
Telephone				I	I	R	R	E	E		E	E	
Public Library			I	I	R	R	R	E	E	E	E	R	R
Academic Libraries										I	E	E	E
Human Resources													
Interview			I	I	R	R	R	E	E	E	E	R	R
Television	I	I	R	R	R	R	R	E	E	E	E		
Radio						I	I	I	I	R	R	E	E
Speech/Presentation				I	I	I	R	R	R	R	R	E	E
2.2 Determine Priorities													
Using Appropriate Sources	I	I	I	I	R	R	R	E	E	R	E	E	E
Decision-Making	I	I	R	R	R	E	E	R	R	R	E		
Primary/Secondary Sources						I	I	I	R	R	E	E	
Public Library			I	I	R	R	R	E	E	E	E	R	R
Academic Libraries										I	E	E	E
<b>LOCATION AND ACCESS</b>													
3.1 Locate Physically and Intellectually													
Layout/Arrangement	I	I	I	R	R	R	R	E	E	E	E		
Reference Section				I	I	R	R	R	E	E	E	E	E
Periodicals		I	I	R	R	R	R	E	E		E	E	R
Media		I	I	R	R	R	R	E	E	E	E	E	R
Equipment		I	I	R	R	R	R	E	E	E	E	E	R
Computers			I	I	R	R	R	E	E	E	E	E	E

	K	1	2	3	4	5	6	7	8	9	10	11	12
<b>3.2 Find within Sources</b>													
Catalog			I	I	R	R	R	E	E	E	E		
Subject Headings/DDC			I	I	R	R	R	E	E	E	E		
Parts of a Book		I	I	R	R	R	E	E	E		E		
Using Back-of-the-Book Indexes				I	I	R	R	E			E		
Using Periodical Indexes						I	I	E	E	R	E	E	
Searching via Computer								I	I	R	E	E	E
<b>INFORMATION USE</b>													
<b>4.1 Engage Information in a Source</b>													
Using Equipment			I	I	R	R	R	E	E	R	E		E
Skimming				I	I	R	R	R	E	E	E		
Listening	I	I	R	R	R	E	E	R	R	R	E	E	
Viewing	I	I	R	R	R	E	E	R	R	R	E	E	
Using Computers (Full-Text)				I	I	I	R	R	R	R	E	E	E
Literature Appreciation													
Folk Tales	I	I	R	R	R	R	R	E	E	E	E		
Picture Books	I	R	R										
Poetry	I	I	R	R	R			E	E	E	E	E	E
Plays					I	I	R	E	R	R	E	E	E
Mythology	I	I	R	R	R	R	R	E	E	E	E	E	E
Biography				I	R	R	E	R	R	E	R	R	
Fiction				I	I	R	E	E	E	R	R	E	E
<b>4.2 Extract Information from a Source</b>													
Circulation	I	I	I	R	R	R	R	E	E	E	E	R	R
Use Areas	I	I	I	R	R	R	R	E	E	E	E	R	R
Taking Notes		I	I	I	R	R	R	E	E	R	R	E	E
Citing		I	I	I	R	R	R	E	E	R	R	E	E
Footnotes/Bibliography		I	I	I	R	R	R	E	E	R	R	E	E
Interviewing			I	I	R	R	R	E	E	R	R	E	
<b>SYNTHESIS</b>													
<b>5.1 Organize from Multiple Sources</b>													
Methods (e.g. Using Notecards)				I	I	I	R	R	R	E	E	E	
Writing with a Computer				I	I	I	R	R	R	E	E	E	
Outlining				I	I	I	R	R	R	E	E	E	
<b>5.2 Present Information</b>													
Choosing a format			I	I	I	R	R	R	E	E	E	E	
Essay					I	I	R	E	R	R	E	R	R
Report					I	I	R	E	R	R	R	E	R
Speech					I	I	R	R	E	R	E	E	
Video						I	I	I	R	R	E	E	
Graphics	I	I	R	R	E	E	E	R	R	R	E	E	
Graphing				I	I	R	R	R	E	E	E		
Bibliography							I	R	R	E	E	R	E
<b>EVALUATION</b>													
<b>6.1 Judge the Product</b>													
Setting Criteria			I	I	R	R	R	E	R	R	E	R	E
Comparisons			I	I	R	R	R	R	R	R	E	R	E
Making/Completing Checklists							I	I	R	R	E	E	E
<b>6.2 Judge the Process</b>													
Big Six Skills		I	I	R	R	R	R	E	R	R	E	E	E
Diary/Journal						I	I			I	R	E	E
Styles Assessment					I	I	R	R	R	E	E	E	



**Appendix 2**  
**Guidelines for School Librarians in Kuwait\***  
**Issued by Department of Libraries, Ministry of Education**

Guidelines:

1. Encourage reading habits for both teachers and students.
2. Provide teachers with variety of materials to assist them to reach the curriculum goals.
3. Meet the needs of teachers through circulating materials and provide them with other resources to use beside the text book.
4. Provide users with the necessary skills to allow them to use the library and its resources.
5. Assist students to improve their talents and their hobbies through the use of the library and the development of library programs and school activities.
6. Enhance teachers' skills and performance through the use of the collection.

Tasks to be carried out and performed during the school year:

1. Keep regular contact with the Department of Libraries to receive and prepare new books and periodicals for circulation and use.
2. Be responsible for purchasing new titles of periodicals from the school monthly budget and inform the Department of Libraries at the end of each month.
3. Register books and periodicals in the proper registration files.
4. Prepare books for use and shelve them according to the classification number.
5. Organize books and children's materials.
6. Arrange and prepare periodicals alphabetically for use on the appropriate shelves.
7. Announce the arrival of new books, references, and periodicals to the school library.

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\*Ministry of Education, Department of Libraries. *The Annual School Library Programme* (in Arabic). Kuwait: The Ministry, 1994, pp. 8-10. Translated by Ali, Abdulrazzaq Hussain in "A Comparative Study of the Perceptions of the School Library Media Specialist's Role as Perceived by Principals, Teachers and School Library Media Specialists in Public Schools in the State of Kuwait," Ph.D. Thesis, Florida State University, 1997, pp. 58-61.

8. Arrange and maintain the card catalog in order.
  9. Prepare the library and its collection to the use and benefit of students during the planned reading period.
  10. Supervise the library activities; form groups of “Friends of the Library” and follow up on their activities.
  11. Form the “Library Committee” to assist and benefit the school community, and keep records of all its meetings.
  12. Guide students to better use the school library and its collection.
  13. Support the curriculum by providing appropriate bibliographies and indexes.
  14. Provide reference assistance to students and help them to find their information needs.
  15. Maintain files for documents received from the Ministry of Education, the Department of Libraries, and other administrative authorities.
  16. Enhance the artistic aspects of the school library.
  17. Perform the annual inventory and prepare the appropriate statistics within the proposed schedule.
  18. Prepare the annual report on the activities of the school library and report shortages within the collection for next year, and submit it to the Department of Libraries.
-



### Appendix 3

#### English-Medium Schools in Kuwait 1999/2000

The Armenian School	Al-Bayan-Hawalli
The English Academy	Al-Bayan Jabriya
The English School- Fahaheel	Al Ru'ya Bilingual School
The New English School	International Academy of Kuwait
The Pakistani School of Fahaheel	American Academy for Girls
Universal American School	American Creativity Academy
Oxford Academy	American International School of Kuwait
American School of Kuwait (ASK)	
Al-Takamul Universal School	Carmel Indian School
The Universal English Arab Academy	Dasman Model School
Al Ghanim Bilingual School for Girls	English School for Girls
Al-Amal Indian School	Gulf English School
The Indian National School	Gulf Indian School
Pakistani International Modern School	Indian School – Junior
National Indian School Fahaheel	Indian School – Senior
Gulf Pakistani English School	The United Indian School
Indian Kuwait Private School	Jabriya Indian School
Indian Central School	Kuwait English School
Al- Rashad Indian School for Girls	Kuwait Indian School
Pakistani English School	Kuwait International English School
Private International Pakistani	
Philippine International English School	Kuwait National English School
Kuwait Garden	Pakistani School
Kuwait Bilingual School	British School of Kuwait
Modern Pakistani School	The English School, Kuwait

**Appendix 4**

**Questionnaire to Determine Instruction for Information Literacy**  
**in English-Medium Schools in Kuwait**



P.O. Box 361  
15454 Dasman, Kuwait  
November 1, 1999

Principal  
School's Name  
Address  
Kuwait

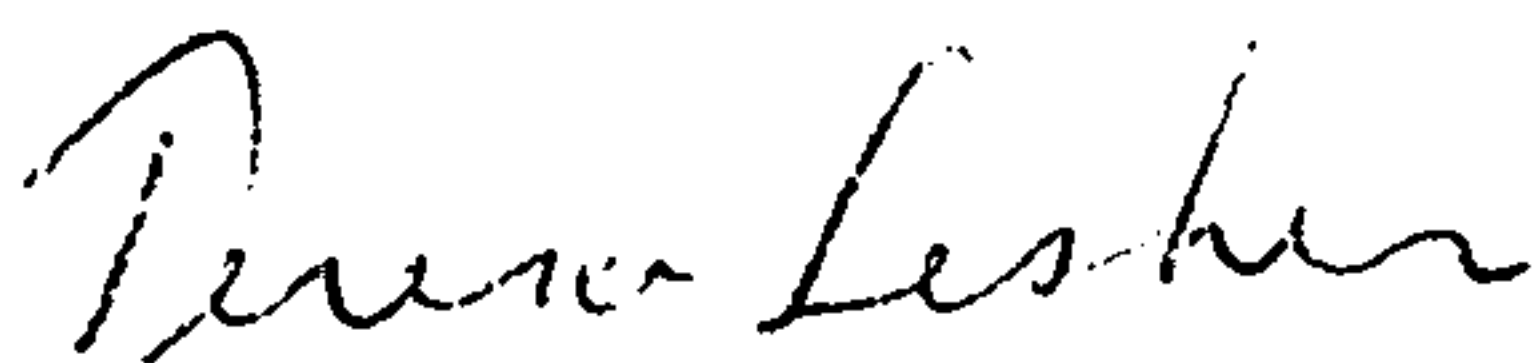
Dear Principal,

I am a qualified librarian currently undertaking doctoral studies in the field of school librarianship from Loughborough University in the UK. My thesis is entitled "Instruction for Information Literacy in Kuwait's English Schools and the Role of Cultural Relevancy." I am presently collecting data about library/information skills instruction in Kuwait.

Would you or your librarian kindly fill the attached questionnaire and mail it to the above address or fax it to me at 532-8064 by Tuesday, November 9, 1999. The information you provide will be treated with the utmost confidentiality and will help me to help Kuwait's students achieve information literacy in what has been called the "Information Age."

If you have any questions or concerns, please call me at the above number. Your cooperation is greatly appreciated.

Sincerely,



Teresa Lesher

Enc.

Please complete the questions below. The information you give will be reported confidentially in a doctoral study about bibliographic instruction in Kuwait's schools. Thank you for your cooperation.

1. Your \_\_\_\_\_ school's  
name \_\_\_\_\_

2. How many students attend your school and how many of them are Kuwaiti nationals? (Please fill the table that best describes your school's grade divisions.)

	Pre-primary K	Primary 1-4	Middle 5-8	Secondary 9-12
Total students				
Kuwaiti students				

	Pre-primary K	Elementary 1-6	Secondary 7-12
Total students			
Kuwaiti students			

3. Does your school incorporate into the curriculum formal, pre-planned instruction in: (check all that apply)

library skills? \_\_\_\_ Yes \_\_\_\_ No

If yes, state grade levels taught. \_\_\_\_\_

information skills? \_\_\_\_ Yes \_\_\_\_ No

If yes, state grade levels taught. \_\_\_\_\_

research skills? \_\_\_\_ Yes \_\_\_\_ No

If yes, state grade levels taught. \_\_\_\_\_

If your response is NO to all three skills areas, please return the questionnaire to

Teresa Leshar at 532-8064 or mail it to

PO Box 361, 15454 Dasman, Kuwait.



*If your response is YES to any of the above skills areas, please proceed to question 4.*

4. Is library/information instruction at your school offered as:

an elective course? \_\_\_\_ Yes \_\_\_\_ No

a required course? \_\_\_\_ Yes \_\_\_\_ No

to non-Muslims in lieu of Islamic studies? \_\_\_\_ Yes \_\_\_\_ No

isolated lessons as required by subject teachers? \_\_\_\_ Yes \_\_\_\_ No

other (*please explain*) \_\_\_\_\_

5. Is your library/information skills instructional program:

a. taught separate from other curricular subjects? \_\_\_\_ Yes \_\_\_\_ No

b. incorporated into regular curricular subjects? \_\_\_\_ Yes \_\_\_\_ No

If yes, is it in consultation with the librarian(s) ? \_\_\_\_ Yes \_\_\_\_ No

c. taught as a generic problem-solving process? \_\_\_\_ Yes \_\_\_\_ No

If yes, is it taught by subject teachers? \_\_\_\_ Yes \_\_\_\_ No

by librarian(s) ? \_\_\_\_ Yes \_\_\_\_ No

by subject teacher and librarian(s) as a team? \_\_\_\_ Yes \_\_\_\_ No

6. For your library/information skills instruction do you use

a textbook? \_\_\_\_ Yes \_\_\_\_ No

If yes, specify title \_\_\_\_\_

a pre-printed workbook? \_\_\_\_ Yes \_\_\_\_ No

If yes, specify title \_\_\_\_\_

locally produced material? \_\_\_\_ Yes \_\_\_\_ No

only oral instruction? \_\_\_\_ Yes \_\_\_\_ No

7. Is library/information skills instruction at your school

a. graded? \_\_\_\_ Yes \_\_\_\_ No

If yes, is it graded as Pass / Fail? \_\_\_\_ Yes \_\_\_\_ No

Or is it assigned letter grades (A, B, C, D, F) ? \_\_\_\_ Yes \_\_\_\_ No

b. incorporated into Language grade? \_\_\_\_ Yes \_\_\_\_ No

c. incorporated into QPA? \_\_\_\_ Yes \_\_\_\_ No

d. other (please specify) \_\_\_\_\_

*Thank your for your participation. Please fax this questionnaire to  
Teresa Leshar at 532-8064 or mail it to  
P.O. Box 361, 15454 Dasman, Kuwait.*



## **Appendix 5**

### **Correspondence with the American Creativity Academy**

1. Letter from the researcher to elementary principals, Ms. Jan Mauldin (boys' campus) and Ms. Ghada Sha'ar (girls' campus).
2. Letter from the researcher to Ms. Buthaina al-Ibrahim, Head of Life Skills Department for boys and girls.
3. Approval from Ms. Jan Mauldin.

Note: The researcher received verbal approval from Ms. Sha'ar and Ms. al-Ibrahim.

Ms. Ghada Al-Sha'ar and Ms. Janeen Mauldin  
Associate Elementary Principals  
American Creativity Academy  
Hawally, Kuwait

May 6, 2000

Dear Ghada and Janeen,

Thank you for seeing me and discussing with me my Ph.D. thesis entitled, "Information Literacy Instruction for Kuwaiti Students and the Role of Cultural Relevancy." As you know, the aim of my study is to determine whether the incorporation of cultural referents in an instructional program for information literacy would result in improved learning among Kuwaiti children. To prepare for the field research, I have studied culturally relevant education, instruction for information literacy and Kuwaiti culture.

Your school has been chosen as the preferred site of my field research since it has the highest ratio of Kuwaiti students in English-medium schools. I am, therefore, requesting your permission to implement my study at the American Creativity Academy (ACA) according to the following proposal.

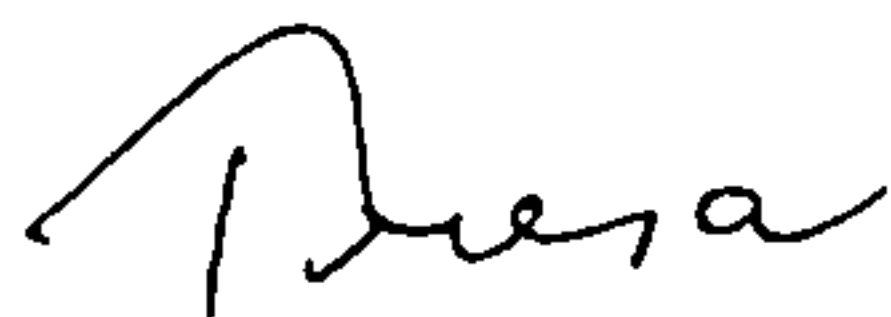
I will undertake to instruct the fourth grade level, both boys and girls, for the first full semester of the 2000/2001 academic year. All classes will receive instruction for information literacy that is based on the most current successful practices of teacher librarians. Instructional aims will be formulated and measured against the "Information Literacy Standards for Student Learning" published by the American Association of School Librarians (AASL) and the Association for Educational Communications and Technology (AECT). All students will learn classical information problem solving strategies. However, half of the girls' classes and half of the boys' classes will have incorporated into their lessons referents to the Kuwaiti, Arab, and Islamic cultures. Identical pre- and post- tests will measure the level of information literacy competence as defined by the AASL and AECT so that I can compare the achievement between the groups that received only classical instruction and those that received more culturally relevant instruction.

I will instruct the fourth grade classes on a volunteer basis. Furthermore, I will supply any library materials that may be important to support the instruction in the case that these materials are not available at both campuses. Therefore, ACA will not incur any unplanned expense with regard to personnel or materials for this project.

I hope that, with the results of my study, I will be able to contribute to the improvement of instruction for Kuwaiti students not only in the field of information literacy, but also in education in general. Your cooperation in this regard is highly appreciated.

If you have any questions or concerns about this proposal, please contact me at 532-8064. Thank you for your consideration and support.

Sincerely yours,



Teresa Lesh

Cc: Dr. Tareq Al-Suwaidan, General Director, ACA



Buthaina Al-Ibrahim  
Head, Life Skills Department  
American Creativity Academy  
Hawalli, Kuwait

May 18, 2000

Dear Buthaina,

السلام عليكم ورحمة الله وبركاته.

As you may know, I am currently undertaking doctoral studies in the field of information literacy. My thesis is entitled, "Information Literacy Instruction for Kuwaiti Students and the Role of Cultural Relevancy." The aim of my study is to determine whether the incorporation of cultural referents in an instructional program for information literacy would result in improved learning among Kuwaiti children. To prepare for the field research, I have studied culturally relevant education, instruction for information literacy and Kuwaiti culture.

Dr. Tareq has given me permission to implement my field research through an instructional program for fourth grade students for the first semester of the 2000/2001 academic year. All students will learn classical information problem solving strategies. However, half of the girls' classes and half of the boys' classes will have incorporated into their lessons referents to the Kuwaiti, Arab, and Islamic cultures. Identical pre- and post- tests will measure the level of information literacy competence so that I can compare the achievement between the groups that received only classical instruction and those that received more culturally relevant instruction.

While this research will provide valuable information for Kuwaiti, Islamic and Arab communities, I feel it is important to test older students also with the same procedures. Ideally, I would like to further implement instruction for information literacy with eighth grade students; unfortunately, ACA no longer offers library skills instruction at this grade level.

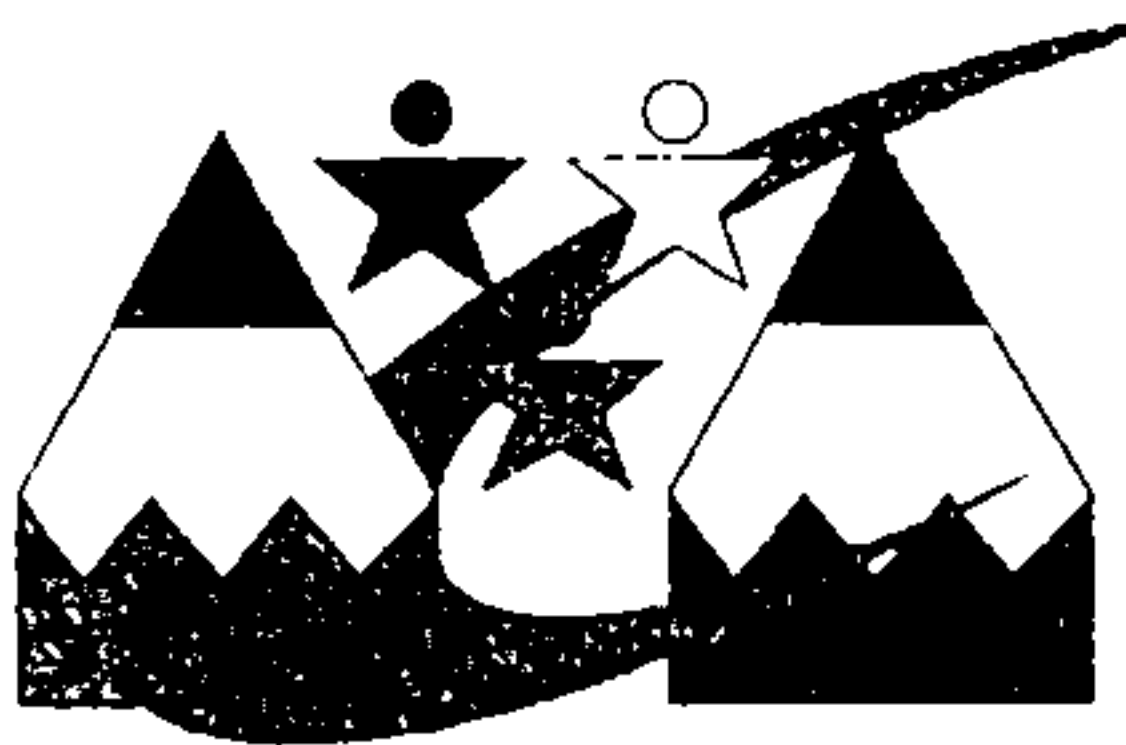
However, I would be able to implement more comprehensive research if you would permit me to instruct ACA's eighth grade students during their life-skills period for the first *quarter* of the 2000/2001 academic year. The main goal of the proposed instruction would be to foster information problem solving by teaching a 6-stage plan, and then using it to solve a realistic information problem. The students could use this plan for any and all decision-making or information problems during their school years and beyond. The skills learned during this quarter could definitely be called "life skills"!

I hope that, with the results of my study, I will be able to contribute to the improvement of instruction for Kuwaiti students not only in the field of information literacy, but also in education in general. I hope you will find my offer feasible. I look forward to discussing this proposal with you at your earliest convenience.

Sincerely,



Terry Leshner



May 20, 2000

Mrs. Teresa Abdel-Motey  
Ph.D. Candidate

Dear Terri,

The American Creativity Academy is most appreciative that you have chosen our school to conduct your research study for your thesis. We are excited and looking forward to having you involved in the school, once again, and to having the opportunity to participate in your data collection.

The study of "Information Literacy Instruction for Kuwaiti Students and the Role of Cultural Relevancy" is of great interest to us as well. It will be our pleasure to have you involved in the teaching process with our Fourth Grade classes this fall semester as you collect your data. We will look forward to reaping the benefits of your teaching and research, and to your final results.

Sincerely yours,

Jan Mauldin  
Elementary Principal



## **Appendix 6**

### **Pilot Study Test with Subsequent Modifications**

1. Fourth grade pre-test used in pilot study entitled “The Science Project.”
2. Eighth grade pre-test used in pilot study entitled “Ancient Civilizations.”

Note: The final versions of these tests with the answers are presented in Appendix 7.

## The Science Project

### Instructions:

Read the following questions carefully and answer them in the spaces provided.

If there are words you don't understand, circle the words.

(Don't worry if you cannot answer a question. Just do your best!!)

Omit for  
pre-  
post-  
test.

Give a lead.

1. Your science teacher would like you to make a poster about animals. You have decided that you will present a variety of 100 different animals on your poster, but you want to do it in an organized way. In the spaces below, describe three different ways you could arrange your animals on the poster.

two is  
sufficient

Omit one space.



Now imagine that your science teacher wants you to make a poster only about desert animals. It should include five facts about each of five different animals (25 facts total). With this assignment in mind, answer all of the following questions.

2. Can you make the poster with the knowledge that you already have about desert animals?

\_\_\_\_\_ yes

\_\_\_\_\_ no

*provide more options*

3. Would you need to get more information to make the poster correctly?

\_\_\_\_\_ yes

\_\_\_\_\_ no

*provide more options*

4. In the space below, list up to three questions that will help you find some facts about animals. (You might ask yourself, "What do I need to know?")

5. To find information for your poster, you could use library books about desert animals. List up to five other resources you could use to find facts about animals.

6. You found a library book entitled "Desert Life" and you only want information about camels. Put a check beside the ideas below that might help you quickly find the information you need.

\_\_\_\_\_ look at the table of contents

\_\_\_\_\_ look on the title page

\_\_\_\_\_ read the book until you find information on camels

\_\_\_\_\_ look in the index

7. You want to find information about camels using the library catalog. From the ideas below, choose the one best way to find such a book.

- ☐ Type the word "camels" in a subject search.
- ☐ Type the word "desert" in a subject search.
- ☐ Type the word "camels" in a title search.
- ☐ Type the word "desert" in a title search.

8. You found some information about animals in a non-fiction book. Put a check beside the facts that are useful for your poster about desert animals.

- ☐ Mammals are animals that nurse their young on milk.
- ☐ Most desert animals have small bodies.
- ☐ Desert animals search for food after sunset.
- ☐ The coyote, kangaroo rat, gecko and bat live in the desert.
- ☐ The world's largest animals live on the grasslands.
- ☐ Amphibians live both in water and on land.
- ☐ Bats live everywhere except very cold places.
- ☐ Most desert animals can live without water for several days.
- ☐ There are about 1 million kinds of animals.
- ☐ To defend themselves, some animals play dead.

9. Look at the each set of facts below. Then check the one that you would use for your poster so it will be more accurate.

- ☐ Fennecs are the smallest of all foxes.
- ☐ Fennecs are only about 45 centimeters long.
- ☐ The large ears of some desert animals help protect them and keep them cool.
- ☐ The large ears of some desert animals serve many purposes.

10. Look at each set of facts below. Then check the one that you would use for your poster so that it will be more complete.

- ☐ Desert predators include lizards, snakes and foxes, and herbivores include antelope, camels and insects.
- ☐ There are both predators and herbivores in the desert.
- ☐ A camel does not store water in its stomach or hump.
- ☐ A camel stores water in body tissues, including the fat in its hump.

confusing.  
omit one.



11. Choose the correct definition for the words on the left.

- |                     |                              |
|---------------------|------------------------------|
| _____ accurate      | a. complete                  |
| _____ relevant      | b. exact and correct         |
| _____ comprehensive | c. the source of information |
|                     | d. related to the subject    |
|                     | e. neat and tidy             |

12. Your teacher asked for five facts for each animal. For the gecko, you found the following information: It has scales. Its feet have claws. Its eyelids are transparent. Its long tongue is used to remove dust from the eyes.

- |   |           |          |
|---|-----------|----------|
| a. Is the information you found relevant for your poster? | _____ yes | _____ no |
| b. Is the information you found accurate for your poster? | _____ yes | _____ no |
| c. Is the information you found comprehensive?            | _____ yes | _____ no |

13. According to the teacher's instructions, you must use facts for the poster. For each sentence below, decide if it is a fact, opinion or point of view. Then beside each sentence write:

F for fact

O for opinion

P for point of view

} difficult to distinguish.  
omit p.o.v.

- |       |   |
|-------|---|
| _____ | It is hard for desert animals to survive.             |
| _____ | Lizards, like other reptiles, are cold-blooded.       |
| _____ | The camel is the most interesting desert animal.      |
| _____ | There is little life in the desert.                   |
| _____ | Most desert mammals stay in the shade during the day. |

14. If your teacher would let you decide how to show what you learned about desert animals (instead of making a poster), what different formats could you use? Name up to five different formats.

Ancient Civilizations

Instructions:

Read the following questions carefully and answer them in the spaces provided.

If there are words you don't understand, circle the words.

(Don't worry if you cannot answer a question. Just do your best!!)

omit for  
pre-  
post-  
test

There have been many great civilizations throughout history. Imagine that for social studies class, your teacher wants you to make a poster about ancient civilizations. Your poster should include five facts about each of ten ancient civilizations (50 facts total). With this assignment in mind, answer all of the following questions.

1. In the spaces below, describe up to three different ways you could organize the information on your poster.

use word "methods"




2. Can you make the poster with the knowledge that you already have about ancient civilizations?

\_\_\_\_\_ yes    \_\_\_\_\_ no    provide more options

3. Would you need to get more information to make the poster correctly?

\_\_\_\_\_ yes    \_\_\_\_\_ no    provide more options

4. In the space below, list up to three questions that will help you find the information you need to make the poster. (You might ask yourself, "What do I need to know?") For pre-post test use Big Six terminology.

5. To find information for your poster, you could use library books about ancient civilizations. List up to five other resources you could use to find information for your poster.

6. You found a library book entitled "The Ancient World" and you only want information about Greece. Put a check beside the ideas below that might help you quickly find the information you need.

- \_\_\_\_\_ look at the table of contents
- \_\_\_\_\_ look on the title page
- \_\_\_\_\_ read the book until you find information about ancient Greece
- \_\_\_\_\_ look in the index

7. You want to find information about the Mayas, who lived in Central America. From the ideas below, choose the one best way to find such information using the library catalog.

- \_\_\_\_\_ Type the word “Mayas” in a subject search.
- \_\_\_\_\_ Type the words “Central America” in a subject search.
- \_\_\_\_\_ Type the word “Mayas” in a title search.
- \_\_\_\_\_ Type the words “Central America” in a title search.

8. While you were looking for information about ancient Greece, you found a non-fiction book entitled “The Ancient World.” Put a check beside the facts that provide useful information about ancient Greece for your poster.

- \_\_\_\_\_ Great ancient civilizations had well-developed forms of government, religion, writing and learning.
- \_\_\_\_\_ Modern Greece covers an area of about 132,000 square kilometers.
- \_\_\_\_\_ The Acropolis is a landmark in Greece that has survived through the centuries to our time.
- \_\_\_\_\_ Social structures were important in ancient civilizations.
- \_\_\_\_\_ Greece has strong ties with Germany, England, France, Japan and Italy.
- \_\_\_\_\_ Greeks today call themselves “Hellenes.”
- \_\_\_\_\_ Corn, grapes and olives were cultivated by the ancient Greeks.
- \_\_\_\_\_ The products manufactured in Greece include shoes, cigarettes and clothing.
- \_\_\_\_\_ Greece became a democratic republic in 1974.
- \_\_\_\_\_ Athens and Sparta were the two largest cities in ancient Greece.

) invert to  
stress  
products

9. Look at the each set of facts below. Then check the one that you would use for your paper so it will be more accurate.

- \_\_\_\_\_ Silk has long been used in China to weave cloth and ribbon.
- \_\_\_\_\_ Silk has been produced throughout the Huang He Valley since 2700 BC.
- \_\_\_\_\_ There were as many as 5000 pictographs in the ancient Chinese language.
- \_\_\_\_\_ Only the wealthy in Ancient China had the time to learn to read and write.

10. Look at each pair of facts below. Then check the one that you would use for your poster so that it will be more complete.

- \_\_\_\_\_ Around 2000 BC, people living in Thailand began making bronze objects.
- \_\_\_\_\_ Around 2000 BC, people living in Thailand made tools, weapons, ornaments and drums out of bronze
- \_\_\_\_\_ The Nile River was important to the development of the Egyptian civilization in northern Africa.
- \_\_\_\_\_ The Nile River not only gave water, it was a means of irrigation and transportation for ancient Egyptians.



11. Choose the correct definition for the words on the left.

- |                     |                              |
|---------------------|------------------------------|
| _____ accurate      | a. complete                  |
| _____ relevant      | b. exact and correct         |
| _____ comprehensive | c. the source of information |
|                     | d. related to the subject    |
|                     | e. neat and tidy             |

12. Your teacher asked for five facts about each civilization on your poster. For Ancient Egypt, you found the following information: Its civilization flourished from before 3400 BC until 30 BC. The king of ancient Egypt, or pharaoh, was regarded as divine. The capital was Memphis. Hieroglyphics is the form of writing that ancient Egyptians used.

- |   |           |          |
|---|-----------|----------|
| a. Is the information you found relevant for your poster? | _____ yes | _____ no |
| b. Is the information you found accurate for your poster? | _____ yes | _____ no |
| c. Is the information you found comprehensive?            | _____ yes | _____ no |

13. According to the teacher's instructions, you must use facts for your poster. For each sentence below, decide if it is a fact, opinion or point of view. Then beside each sentence write:

F for fact

O for opinion

P for point of view

} difficult to distinguish.  
Omit p.o.v.

- |       |  |
|-------|--|
| _____ | The Aryan culture was based on four main social classes.   |
| _____ | The Brahmans, or the highest class, were the best people in ancient India.                             |
| _____ | The Aryan civilization is the most fascinating ancient civilization to study.                          |
| _____ | The Aryan people were very civilized.  |
| _____ | The Buddha, whose name was really Gautama Siddhartha, lived from 560 to about 485 BC in ancient India. |

14. If your teacher gave you a choice of formats for presenting what you learned about the ancient civilizations (instead of a poster), what different formats could you use? Name up to five different formats.

## **Appendix 7**

### **Answer Keys with Teacher Verification**

1. Fourth grade pre- post-test entitled “The Science Project” with answers.
2. Eighth grade pre- post-test entitled “Ancient Civilizations” with answers.
3. Teacher verification of answer keys.
4. Fourth grade final test with answers.



The Science Project

Instructions:

Read the following questions carefully and answer them in the spaces provided.

If there are words you don't understand, circle the words.

1. Imagine that your science teacher would like you to make a poster about animals. You have decided that you will present a variety of 100 different animals on your poster, but you want to do it in an organized way. In the spaces below, describe two different ways you could arrange the animals on the poster.

alphabetical  
hierarchical  
topical  
compare - contrast

Now imagine that your science teacher wants you to make a poster only about desert animals. It should include five facts about each of five different animals (25 facts total). With this assignment in mind, answer all of the following questions.

2. Can you make the poster with the knowledge that you already have about desert animals?

\_\_\_\_\_ yes      \_\_\_\_\_ probably yes      \_\_\_\_\_ probably not      ☒ no

3. Would you need to get more information to make the poster correctly?

☒ yes      \_\_\_\_\_ probably yes      \_\_\_\_\_ probably not      \_\_\_\_\_ no

4. In the space below, list up to three questions that will help you find some facts about animals. (You might ask yourself, "What do I need to know?")

Any question that helps define the task will be accepted. Examples:

1. What kind of camels are there?
2. Is a fox a desert animal?
3. Where do snakes live?

5. To find information for your poster, you could use library books about desert animals. List up to five other resources you could use to find facts about animals.

Internet  
text books  
encyclopedia  
TV programs  
teachers  
magazines

(any source with such information will be accepted.)

6. You found a library book entitled "Desert Life" and you only want information about camels. Put a check beside the ideas below that might help you quickly find the information you need.

- ☒ look at the table of contents
- ☐ look on the title page
- ☐ read the book until you find information on camels
- ☒ look in the index

7. You want to find information about camels using the library catalog. From the ideas below, choose the one best way to find such a book.

- ☒ Type the word "camels" in a subject search.
- ☐ Type the word "desert" in a subject search.
- ☐ Type the word "camels" in a title search.
- ☐ Type the word "desert" in a title search.



8. You found some information about animals in a non-fiction book. Put a check beside the facts that are useful for your poster about desert animals.

- ☐ Mammals are animals that nurse their young on milk.
- ☒ Most desert animals have small bodies.
- ☒ Desert animals search for food after sunset.
- ☒ The coyote, kangaroo rat, gecko and bat live in the desert.
- ☐ The world's largest animals live on the grasslands.
- ☐ Amphibians live both in water and on land.
- ☒ Bats live everywhere except very cold places.
- ☒ Most desert animals can live without water for several days.
- ☐ There are about 1 million kinds of animals.
- ☐ To defend themselves, some animals play dead.

9. Look at each set of facts below. Then check the one that you would use for your poster so it will be more accurate.

- ☐ Fennecs are the smallest of all foxes.
  - ☒ Fennecs are only about 45 centimeters long.
- 
- ☒ The large ears of some desert animals help protect them and keep them cool.
  - ☐ The large ears of some desert animals serve many purposes.

10. Look at each set of facts below. Then check the one that you would use for your poster so that it will be more complete.

- ☒ Desert predators include lizards, snakes and foxes, and herbivores include antelope, camels and insects.
  - ☐ There are both predators and herbivores in the desert.
- 
- ☐ A camel does not store water in its stomach.
  - ☒ A camel stores water in body tissues, including the fat in its hump.

11. Choose the correct definition for the words on the left.

- |                        |                              |
|------------------------|------------------------------|
| <u>b</u> accurate      | a. complete                  |
| <u>d</u> relevant      | b. exact and correct         |
| <u>a</u> comprehensive | c. the source of information |
|                        | d. related to the subject    |
|                        | e. neat and tidy             |

12. Your teacher asked for five facts for each animal. For the gecko, you found the following information: It has scales. Its feet have claws. Its eyelids are transparent. Its long tongue is used to remove dust from the eyes.

- |   |                   |                  |
|---|-------------------|------------------|
| a. Is the information you found relevant for your poster? | <u>✓</u> yes      | <u>      </u> no |
| b. Is the information you found accurate for your poster? | <u>✓</u> yes      | <u>      </u> no |
| c. Is the information you found comprehensive?            | <u>      </u> yes | <u>✓</u> no      |

13. According to the teacher's instructions, you must use facts for the poster. For each sentence below, decide if it is a fact or opinion. Then beside each sentence write:

F for fact  
O for opinion

- O   It is hard for desert animals to survive.  
  F   Lizards, like other reptiles, are cold-blooded.  
  O   The camel is the most interesting desert animal.  
  O   There is little life in the desert.  
  F   Most desert mammals stay in the shade during the day.

14. If your teacher would let you decide how to show what you learned about desert animals (instead of making a poster), what different formats could you use? Name up to five different formats.

journal  
letter  
multimedia presentation  
report  
speech  
videotape  
collage  
newspaper  
model

(Others may be accepted)



Name \_\_\_\_\_

## Ancient Civilizations

### Instructions:

Read the following questions carefully and answer them in the spaces provided.

If there are words you don't understand, circle the words.

There have been many great civilizations throughout history. Imagine that for social studies class, your teacher wants you to make a poster about ancient civilizations. Your poster should include five facts about each of ten ancient civilizations (50 facts total). With this assignment in mind, answer all of the following questions.

1. In the spaces below, describe three methods of organization you could use for your poster.

hierarchical  
topical  
chronological  
compare-contrast  
alphabetical

2. Can you complete the poster with the knowledge that you already have about ancient civilizations?

\_\_\_\_\_ yes    \_\_\_\_\_ probably yes    \_\_\_\_\_ probably not    ☒ no

3. Would you need to get more information to make the poster correctly?

☒ yes    \_\_\_\_\_ probably yes    \_\_\_\_\_ probably not    \_\_\_\_\_ no

4. In the space below, list up to three questions that will help you define the information problem to be solved.

Any question that helps define the task will be accepted - Examples:

1. When is the project due?
2. How did the ancient Egyptians live?
3. Can I use my social studies book to collect facts?

5. To find information for your poster, you could use library books about ancient civilizations. List up to five other resources you could use to find information for your poster.

text book  
encyclopedia  
TV programs  
teachers  
magazines

(any source with such information will be accepted.)

6. You found a library book entitled "The Ancient World" and you only want information about Greece. Put a check beside the ideas below that might help you quickly find the information you need.

- ☒ look at the table of contents  
☐ look on the title page  
☐ read the book until you find information about ancient Greece  
☒ look in the index



7. You want to find information about the Mayas, who lived in Central America. From the ideas below, choose the one best way to find such information using the library catalog.

- ☒ Type the word "Mayas" in a subject search.
- ☐ Type the words "Central America" in a subject search.
- ☐ Type the word "Mayas" in a title search.
- ☐ Type the words "Central America" in a title search.

8. While you were looking for information about ancient Greece, you found a non-fiction book entitled "The Ancient World." Put a check beside the facts that provide useful information about the ancient Greek civilization for your poster.

- ☒ Great ancient civilizations had well-developed forms of government, religion, writing and learning.
- ☐ Modern Greece covers an area of about 132,000 square kilometers.
- ☒ The Acropolis is a landmark in Greece that has survived through the centuries to our time.
- ☒ Social structures were important in ancient civilizations.
- ☐ Greece has strong ties with Germany, England, France, Japan and Italy.
- ☐ Greeks today call themselves "Hellenes."
- ☒ Corn, grapes and olives were cultivated by the ancient Greeks.
- ☐ Shoes, cigarettes and clothing are manufactured in Greece.
- ☐ Greece became a democratic republic in 1974.
- ☒ Athens and Sparta were the two largest cities in ancient Greece.

9. Look at the each set of facts below. Then check the one that you would use for your paper so it will be more accurate.

- ☐ Silk has long been used in China to weave cloth and ribbon.
- ☒ Silk has been produced throughout the Huang He Valley since 2700 BC.
- ☒ There were as many as 5000 pictographs in the ancient Chinese language.
- ☐ Only the wealthy in Ancient China had the time to learn to read and write.

10. Look at each pair of facts below. Then check the one that you would use for your poster so that it will be more complete.

- ☐ Around 2000 BC, people living in Thailand began making bronze objects.
- ☒ Around 2000 BC, people living in Thailand made tools, weapons, ornaments and drums out of bronze
- ☐ The Nile River was important to the development of the Egyptian civilization in northern Africa.
- ☒ The Nile River not only gave water, it was a means of irrigation and transportation for ancient Egyptians.

11. Choose the correct definition for the words on the left.

- |                        |                              |
|------------------------|------------------------------|
| <u>b</u> accurate      | a. complete                  |
| <u>d</u> relevant      | b. exact and correct         |
| <u>a</u> comprehensive | c. the source of information |
|                        | d. related to the subject    |
|                        | e. neat and tidy             |

12. Your teacher asked for five facts about each civilization on your poster. For Ancient Egypt, you found the following information: Its civilization flourished from before 3400 BC until 30 BC. The king of ancient Egypt, or pharaoh, was regarded as divine. The capital was Memphis. Hieroglyphics is the form of writing that ancient Egyptians used.

- |   |                   |                  |
|---|-------------------|------------------|
| a. Is the information you found relevant for your poster? | <u>✓</u> yes      | <u>      </u> no |
| b. Is the information you found accurate for your poster? | <u>✓</u> yes      | <u>      </u> no |
| c. Is the information you found comprehensive?            | <u>      </u> yes | <u>✓</u> no      |

13. According to the teacher's instructions, you must use facts for your poster. For each sentence below, decide if it is a fact or an opinion. Then beside each sentence write:

F for fact  
O for opinion

- |          |  |
|----------|--|
| <u>F</u> | The Aryan culture was based on four main social classes.   |
| <u>O</u> | The Brahmans, or the highest class, were the best people in ancient India.                             |
| <u>O</u> | The Aryan civilization is the most fascinating ancient civilization to study.                          |
| <u>O</u> | The Aryan people were very civilized.  |
| <u>F</u> | The Buddha, whose name was really Gautama Siddhartha, lived from 560 to about 485 BC in ancient India. |

14. If your teacher gave you a choice of formats for presenting what you learned about the ancient civilizations (instead of a poster), what different formats could you use? Name up to five different formats.

journal  
letter  
multimedia presentation  
report  
speech  
vidiotape  
collage  
model

(others may be accepted)



**Validity of Test Instruments**

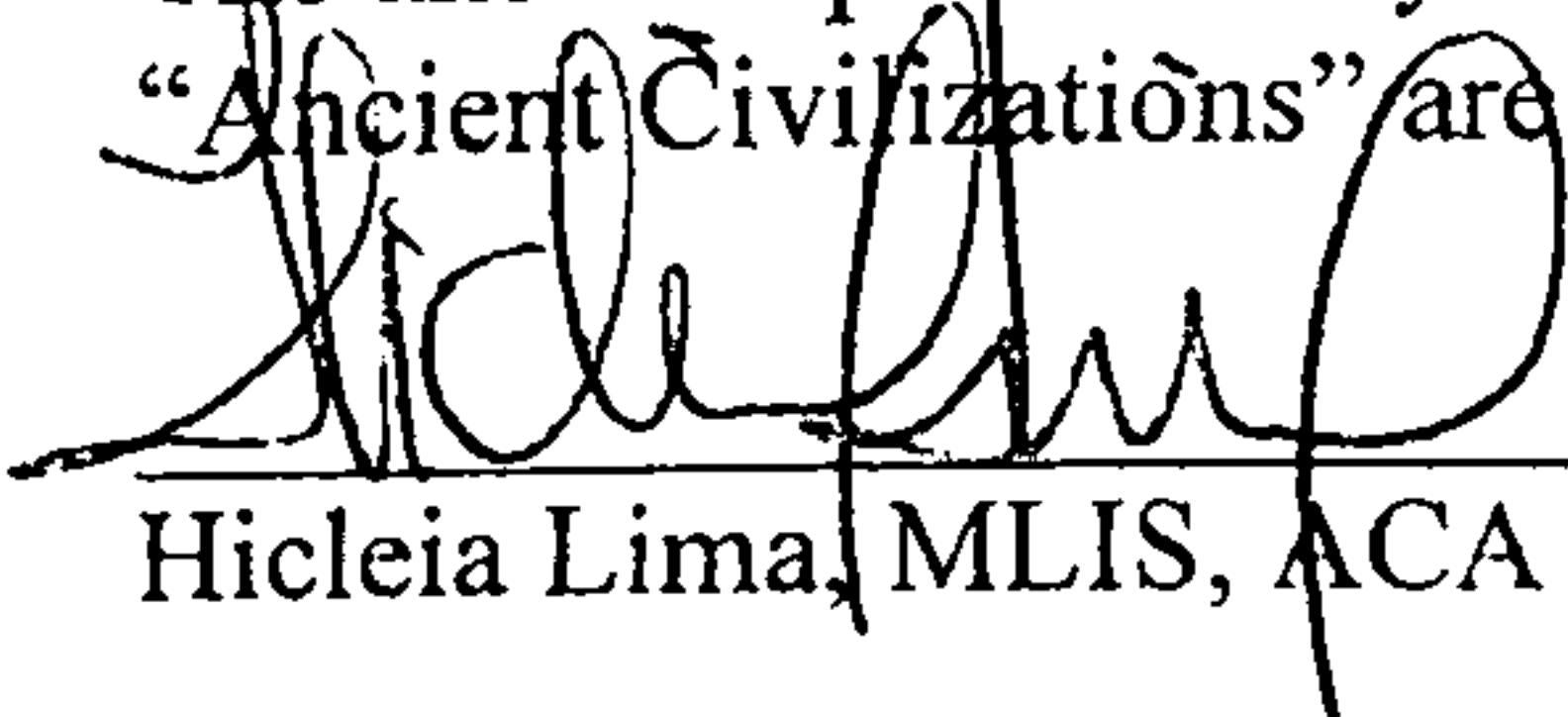
The pretests for both the fourth grade and eighth grade students were submitted to subject teachers and a qualified librarian to verify the answer key provided by the researcher. Their statements as to the validity of the answers are presented below.

The answers provided by Ms. T. M. Leshar for the eighth grade test entitled “Ancient Civilizations” are correct according to my knowledge of ancient civilizations.



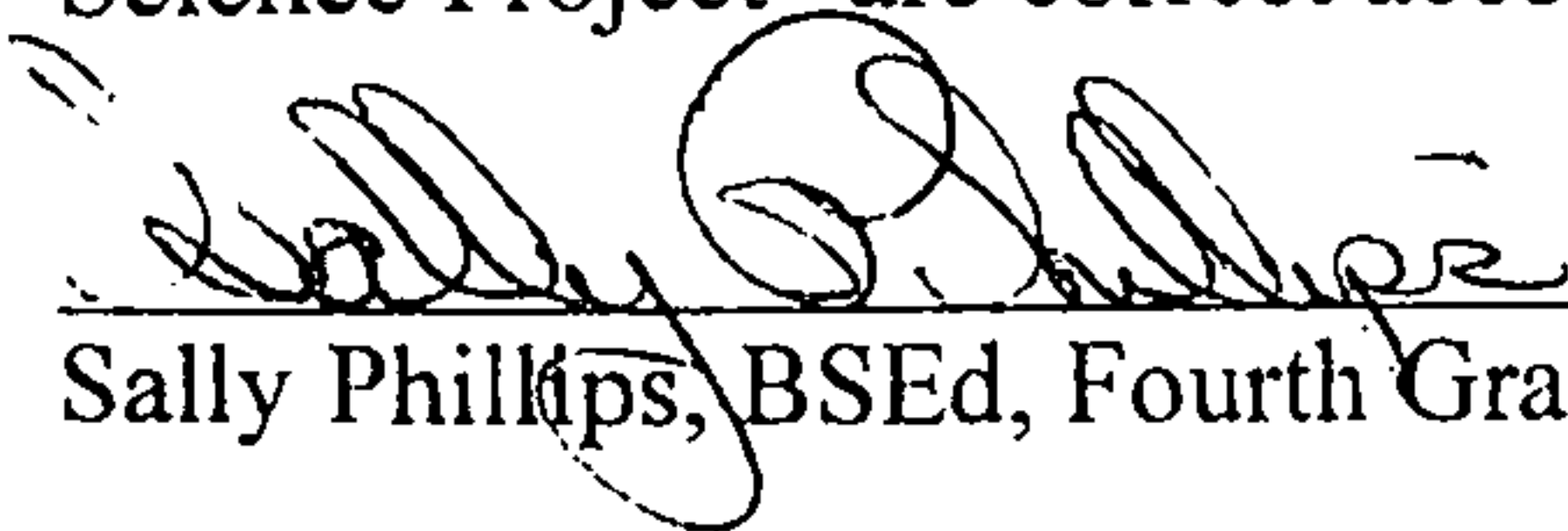
Glen Pinder, BSEd, Middle School Social Studies Teacher

The answers provided by Ms. T. M. Leshar for the eighth grade test entitled “Ancient Civilizations” are correct according to my knowledge of library studies.



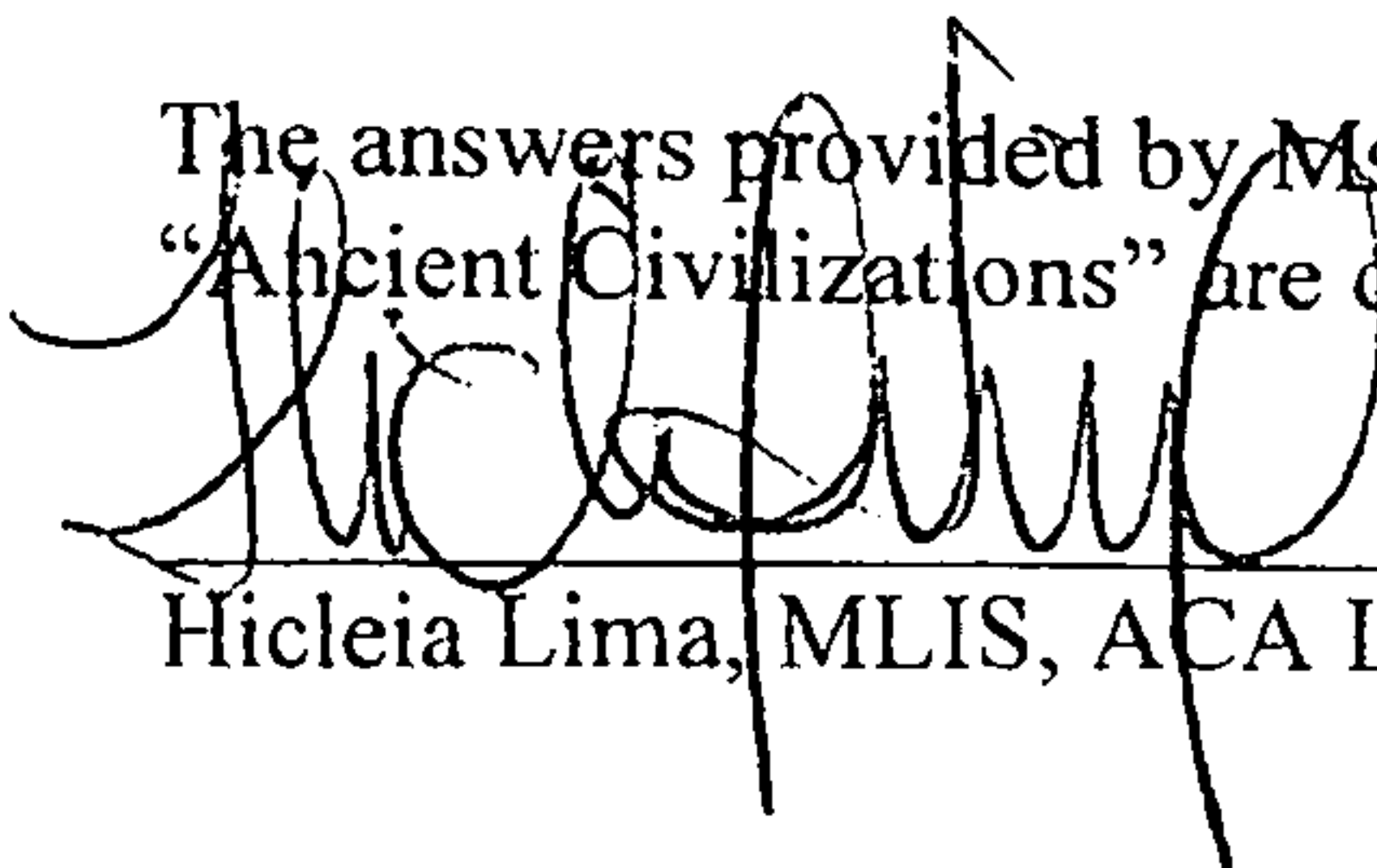
Hicleia Lima, MLIS, ACA Librarian

The answers provided by Ms. T. M. Leshar for the fourth grade test entitled “The Science Project” are correct according to my knowledge of the animal kingdom.



Sally Phillips, BSEd, Fourth Grade Teacher

The answers provided by Ms. T. M. Leshar for the eighth grade test entitled “Ancient Civilizations” are correct according to my knowledge of library studies.



Hicleia Lima, MLIS, ACA Librarian

Name \_\_\_\_\_

# The Big Six Test

Match the Big Six step with the definitions.

- |   |  |
|---|--|
| <u>  c  </u> Synthesis                      | a. ask what needs to be done   |
| <u>  b  </u> Location and Access            | b. find the information you need                                     |
| <u>  a  </u> Task Definition                | c. put it together in a meaningful way                               |
| <u>  e  </u> Evaluation                     | d. make a plan to find information                                   |
| <u>  d  </u> Information Seeking Strategies | e. see if you did the job right                                      |
| <u>  f  </u> Information Use                | f. treasure information that is accurate, relevant and comprehensive |

Put the Big Six steps in the correct order by putting a “1” by the first step, a “2” by the second step, and so on.

- 5   Synthesis
- 3   Location and Access
- 1   Task Definition
- 6   Evaluation
- 2   Information Seeking Strategies
- 4   Information Use



# **Appendix 8** **Grade Eight Final Test Scores**

The final test for eighth grade students was marked by two independent scorers. Below are the two independent scores for each student and the mean scores used for the data analysis.

Student Number	First Score	Second Score	Mean Score
77	7	7	7
78	0	0	0
79	3	4	3.5
80	8	6	7
81	8	4	6
82	6	5	5.5
83	5	3	4
84	6	3	4.5
85	11	10	10.5
86	13	8	10.5
87	6	3	4.5
88	8	7	7.5
89	15	12	13.5
90	10	5	7.5
91	6	3	4.5
92	5	3	4
93	9	5	7
94	14	11	12.5
95	3	6	4.5
96	5	1	3
97	4	4	4
98	0	1	0.5

*continued on following page*

Student Number	First Score	Second Score	Mean Score
99	4	6	5
100	0	0	0
101	3	4	3.5
102	2	4	3
103	6	4	5
104	6	1	3.5
105	0	0	0
106	5	3	4
107	6	7	6.5
108	6	7	6.5
109	7	5	6
110	5	4	4.5
111	3	7	5
112	8	8	8
113	8	7	7.5
114	11	7	9
115	2	4	3
116	9	10	9.5
117	6	8	7
118	0	1	0.5
119	7	7	7
120	9	8	8.5
121	5	4	4.5
122	10	8	9
123	4	5	4.5
124	6	6	6
125	9	7	8
126	9	8	8.5



## Appendix 9

### Raw Data According to Grade, Gender and Type of Instruction

Student Number	Grade	Gender	Type of Instruction	Pre-Test Score	Post-Test Score	Achievement Score	Final Test Score
1	4	Female	Kuwaiti	4	18	14	2
2	4	Female	Kuwaiti	10	32	22	0
3	4	Female	Kuwaiti	10	17	7	1
4	4	Female	Kuwaiti	4	27	23	1
5	4	Female	Kuwaiti	7	18	11	2
6	4	Female	Kuwaiti	8	15	7	3
7	4	Female	Kuwaiti	11	24	13	1
8	4	Female	Kuwaiti	4	16	12	1
9	4	Female	Kuwaiti	5	22	17	6
10	4	Female	Kuwaiti	8	15	7	1
11	4	Female	Kuwaiti	3	13	10	2
12	4	Female	Kuwaiti	7	20	13	5
13	4	Female	Kuwaiti	16	26	10	1
14	4	Female	Kuwaiti	14	23	9	2
15	4	Female	Kuwaiti	10	28	18	7
16	4	Female	Kuwaiti	*	18	*	2
17	4	Female	Kuwaiti	*	22	*	4
18	4	Male	Kuwaiti	9	20	11	5
19	4	Male	Kuwaiti	2	22	20	3
20	4	Male	Kuwaiti	5	14	9	4
21	4	Male	Kuwaiti	4	15	11	1
22	4	Male	Kuwaiti	13	32	19	5
23	4	Male	Kuwaiti	1	16	15	3
24	4	Male	Kuwaiti	0	12	12	3
25	4	Male	Kuwaiti	0	10	10	3
26	4	Male	Kuwaiti	3	16	13	5
27	4	Male	Kuwaiti	6	26	20	3
28	4	Male	Kuwaiti	6	13	7	4
29	4	Male	Kuwaiti	4	16	12	5
30	4	Male	Kuwaiti	8	13	5	1
31	4	Male	Kuwaiti	0	14	14	3
32	4	Male	Kuwaiti	5	10	5	2

\*A score is not available for this student.

Student Number	Grade	Gender	Type of Instruction	Pre-Test Score	Post-Test Score	Achievement Score	Final Test Score
33	4	Male	Kuwaiti	8	20	12	2
34	4	Male	Kuwaiti	8	19	11	1
35	4	Male	Kuwaiti	18	37	19	8
36	4	Male	Kuwaiti	12	22	10	3
37	4	Male	Kuwaiti	*	12	*	4
38	4	Male	Kuwaiti	1	9	8	4
39	4	Female	Western	10	20	10	6
40	4	Female	Western	12	28	16	2
41	4	Female	Western	10	15	5	3
42	4	Female	Western	17	30	13	4
43	4	Female	Western	6	13	7	4
44	4	Female	Western	4	25	21	6
45	4	Female	Western	8	13	5	3
46	4	Female	Western	10	24	14	5
47	4	Female	Western	14	*	*	3
48	4	Female	Western	15	14	-1	4
49	4	Female	Western	1	8	7	0
50	4	Female	Western	14	22	8	5
51	4	Female	Western	7	20	13	4
52	4	Female	Western	2	19	17	5
53	4	Female	Western	8	24	16	6
54	4	Female	Western	8	30	22	3
55	4	Female	Western	2	6	4	6
56	4	Female	Western	7	18	11	2
57	4	Female	Western	*	14	*	2
58	4	Male	Western	13	21	8	8
59	4	Male	Western	6	11	5	1
60	4	Male	Western	6	17	11	7
61	4	Male	Western	7	13	6	1
62	4	Male	Western	4	7	3	6
63	4	Male	Western	14	21	7	2
64	4	Male	Western	0	6	6	0
65	4	Male	Western	16	26	10	5
66	4	Male	Western	15	18	3	5
67	4	Male	Western	12	12	0	0
68	4	Male	Western	9	25	16	0

\*A score is not available for this student.



Student Number	Grade	Gender	Type of Instruction	Pre-Test Score	Post-Test Score	Achievement Score	Final Test Score
69	4	Male	Western	12	10	-2	3
70	4	Male	Western	12	16	4	0
71	4	Male	Western	4	9	5	1
72	4	Male	Western	5	8	3	4
73	4	Male	Western	6	16	10	4
74	4	Male	Western	3	19	16	3
75	4	Male	Western	15	20	5	1
76	4	Male	Western	3	8	5	0
77	8	Female	Western	26	30	4	7
78	8	Female	Western	10	22	12	0
79	8	Female	Western	18	27	9	3.5
80	8	Female	Western	21	29	8	7
81	8	Female	Western	12	28	16	6
82	8	Female	Western	27	34	7	5.5
83	8	Female	Western	13	25	12	4
84	8	Female	Western	29	30	1	4.5
85	8	Female	Western	*	30	*	10.5
86	8	Female	Kuwaiti	22	32	10	10.5
87	8	Female	Kuwaiti	15	20	5	4.5
88	8	Female	Kuwaiti	20	27	7	7.5
89	8	Female	Kuwaiti	33	33	0	13.5
90	8	Female	Kuwaiti	9	25	16	7.5
91	8	Female	Kuwaiti	22	36	14	4.5
92	8	Female	Kuwaiti	13	12	-1	4
93	8	Female	Kuwaiti	24	33	9	7
94	8	Female	Kuwaiti	15	27	12	12.5
95	8	Female	Kuwaiti	15	20	5	4.5
96	8	Female	Kuwaiti	*	32	*	3
97	8	Male	Western	15	22	7	4
98	8	Male	Western	26	23	-3	0.5
99	8	Male	Western	18	22	4	5
100	8	Male	Western	16	16	0	0
101	8	Male	Western	18	23	5	3.5
102	8	Male	Western	19	27	8	3
103	8	Male	Western	25	31	6	5
104	8	Male	Western	19	26	7	3.5

\*A score is not available for this student.

Student Number	Grade	Gender	Type of Instruction	Pre-Test Score	Post-Test Score	Achievement Score	Final Test Score
105	8	Male	Western	10	12	2	0
106	8	Male	Western	*	27	*	4
107	8	Male	Kuwaiti	32	37	5	6.5
108	8	Male	Kuwaiti	31	30	-1	6.5
109	8	Male	Kuwaiti	24	25	1	6
110	8	Male	Kuwaiti	22	36	14	4.5
111	8	Male	Kuwaiti	19	20	1	5
112	8	Male	Kuwaiti	28	22	-6	8
113	8	Male	Kuwaiti	25	27	2	7.5
114	8	Male	Kuwaiti	25	32	7	9
115	8	Male	Kuwaiti	18	33	15	3
116	8	Male	Kuwaiti	22	35	13	9.5
117	8	Male	Kuwaiti	20	34	14	7
118	8	Male	Kuwaiti	19	26	7	0.5
119	8	Male	Kuwaiti	30	37	7	7
120	8	Male	Kuwaiti	30	27	-3	8.5
121	8	Male	Kuwaiti	30	32	2	4.5
122	8	Male	Kuwaiti	6	17	11	9
123	8	Male	Kuwaiti	25	39	14	4.5
124	8	Male	Kuwaiti	38	35	-3	6
125	8	Male	Kuwaiti	*	27	*	8
126	8	Male	Kuwaiti	*	39	*	8.5

\*A score is not available for this student.