

Deanship of Graduate Studies

Al –Quds university



**The Effect of Using Multimedia Interaction in
English Language Skills of the 11th Grade**

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M .A. Thesis

Jerusalem - Palestine

1431 / 2010

**The Effect of Using Multimedia Interaction in
English Language Skills of the 11th Grade**

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**A thesis Submitted in Partial Fulfillment of The Requirements
for The Degree of Master of Arts in Teaching Methods.**

1431 / 2010

Al- Quds University



Deanship of Graduate Studies

Teaching Methods / Education Department

Thesis Approval

**The Effect of Using Multimedia Interaction in
English Language Skills of the 11th Grade**

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Jerusalem - Palestine

1431 / 2010

Dedication

**To my parents ,
my brothers , my sisters ,
my relatives and
my friends .**

Declaration

I certify that this thesis is submitted for the Masters degree as a result of my own research except where otherwise acknowledged . This thesis has not been submitted for a higher degree to any other university or institution .

signature :

Shereen Ali Mahmmod Al halabyah

Date :

Acknowledgment

Thanks God who granted me the ability and courage to finish up this work .

I am greatly indebted to the kindness , assistance and patience of Dr Ahmad Fahim Jabr for his great help and guidance throughout this study that made the present work possible .

I would like to thank my teachers in Al Quds university for their help and great support that they gave to me .

Special thanks to my parents and to my family who help me throughout my study in the university.

Abstract

The Effect of Using Multimedia Interaction in English Language Skills of the 11th Grade .

This study aimed at investigating the effect of using multimedia interaction in teaching English language skills of the eleventh grade in the directorate of education , Jerusalem suburbs - Al Ram .

The population of the study consisted of all the eleventh grade students studying during 2009/2010 at the directorate of education , Jerusalem suburbs - Al Ram whose number was (1602). The study sample was (96) students and was intentionally divided into four group . Two groups were in Abu Dis girls school and the other two groups were in the Arab institute for boys .In each school , there was one control group and one experimental group. In each school , the experimental group was taught by using multimedia interaction , while the other control group was taught by using the traditional method of teaching .

To investigate the effect of using multimedia interaction in teaching English language skills , and in order to answer the questions of the study and test its hypotheses, means , standard deviations and (Two way Analysis of Variance) were used .

Results of the study indicated that :

There are statistical differences at ($\alpha \leq 0.05$) in the means of the 11th grade students' achievement test due to the use of multimedia interaction and due to the interaction between multimedia interaction and the students' gender .

There are no statistical differences at ($\alpha \leq 0.05$) in the means of the 11th grade students' achievement test due to the students' gender .

In the light of the previous results, the researcher has presented several recommendations , some of them are :

For teachers , multimedia interaction is a useful way for explaining English language skills .

For investigators , further similar studies are recommended .

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Chapter 1

Introduction

1.1 Introduction

English language is considered a vehicle of communication for its importance in the different aspects of life , and it gains the status of being the major world language whether used as a mother tongue language or as a second or even a foreign language . (Richards , 1991)

Due to the importance of English language, teachers use different means to convey its skills to students . One of these means is multimedia interaction which provides learners with an atmosphere that enables them to practise the language skills in a meaningful context , particularly some students find it difficult to respond emotionally, imaginatively , and socially to instruction . (Eisner , 2005)

1.1.1 What is multimedia ?

Multimedia can be defined as" an integration of multiple media elements (audio, video , graphics , text ,animation , etc.) into one synergetic and symbiotic whole that results in more benefits for the end user than any one of the media elements can provide individually " (Reddi, 2003 , pp. 3-7)

Multimedia is also defined as "the combination of a variety of communication channels into a co- ordinate communicative experience for which an integrated cross – channel language of interpretation doesn't exist " (Elsom-Cook, 2001, p.7)

Multimedia has another definition which is "the use of text, video, sound, graphics and animation to present information, thus providing a powerful new tool for education ." (Lookkatch, 1995 , pp .10-13)

Multimedia technology implies that there is an element of interactivity. The concept of interaction is considered along two dimensions : One of them is the capacity of the system to allow the user to control the pace of presentation and to make choices about which pathways are followed to move through the content , and the other one is the ability of the system to accept input from the user and provide appropriate feedback to that input . Multimedia technologies may be delivered on computer via CD-ROM ,DVD or via the internet , or on other devices such as mobile phone and personal digital assistants capable of supporting interactive and integrated the delivery of digital audio ,video , image, and text data .The integration of multimedia technologies leads to a transformation of pedagogy from traditional instructive teacher –centred approaches to the more desirable constructive learner approaches that are seen as embodying essential characteristics of more effective learning environments . (Tearle , Dillon , & Davis , 1999 ; Relan & Gillani , 1997; Lefoe, 1998; Richards & Nason , 1999 .)

1.1.2 multimedia in education:

Multimedia has introduced important changes in the educational system and has impacted the way teachers communicate information to the students. It enables teachers to represent the information in various media, i.e., via sound, text, animation, video and images.

Teachers are now the directors of knowledge and can use various combinations of media elements to create interactive educational content which creates a stimulating environment for learning and retaining the information delivered . (Neo & Neo, 2000)

The growth in the use of multimedia within the education sector has been accelerated in recent years, and will continue its expansion in the future. The development of multimedia technologies for learning offers new ways in which learning can take place in schools , enabling teachers to have access to multimedia learning resources, which supports the constructive concept development, allowing teachers to focus more on being facilitators of learning while working with individual students and extending the use of multimedia learning resources . A multimedia learning environment involves a number of components or elements in order to enable learning to take place. Hardware and software are parts of the requirement . In addition , multimedia learning integrates five types of media to provide flexibility in expressing the creativity of a student and in exchanging ideas . www.worldscibooks.com/socialsci/7111.html

Therefore, multimedia in education has the potential to go beyond the boundaries of interaction and explorative learning. A student can ‘create’ expressions that reflect his/her understanding of concepts by combining text, voice and animation utilities. Teachers could find lesson plans that can be individualized . <http://encyclopedia.jrank.org/articles/pages/6733/Elements-of-Multimedia-in-Education.html>

With the use of multimedia, students can utilize the information presented to them by the teacher , and represent it in a more meaningful way , using different media elements . There are many multimedia technologies that are available for teachers to use to create innovative and interactive courses . Multimedia applications benefit from being easy to use, with minimal training or self-learning . Therefore , it is likely that there will be a continual increase in the demands placed on computer based multimedia systems. Moreover, multimedia documents not only provide a means for communicating and storing information, but they can also be designed to receive information from the reader and process it to provide individualized responses. This interactivity adds a new dimension to the reading / writing process and the capabilities of reading and writing.

(Savery, 2005).

Multimedia can address the intelligences much more than traditional teaching to stimulate teacher / student interaction. www.nsba.org/sbot/toolkit/tiol.html

Therefore , students must be trained to select appropriate multimedia tools and to apply them to the learning task within the learning environment in order to enable effective learning to take place. (Asthana , 2007)

The importance of the roles of the learners is also sustained in open learning situations in which learners can control their program by requesting a multimedia unit at a convenient time . Even home-based students may join the live session. The ways in which users or participants in multimedia sessions access multimedia or connect with others have important consequences during a class. Multimedia learning material can be accessed directly from a server and students learn to make use of it as an aid to retrieve information

from multiple sources such as digital libraries and multimedia servers that could support computer-assisted learning environments. Moreover, students learn to develop multimedia materials, especially as a component of project-based learning that is rooted in constructivism and in cooperative learning.

[http : www . iste. Org /content/ navigationmenu / research / reports / research / - on – technology – in - education - 2000- / m.](http://www.iste.org/content/navigationmenu/research/reports/research-on-technology-in-education-2000/)

Several researches have shown that the use of multimedia can aid in the comprehension and retention of student learning. As a result , more educators are utilizing Web –based multimedia materials to augment instruction online and in the classroom. A theoretical framework was provided for transforming students Centred Discussion (SCD) to a new multimedia pedagogy showed that new multimedia (SCD) pedagogy represents a new way of teaching and learning . Positive responses and feedback have been collected from students about their ability to interpret facts , compare and contract material, and make inferences based on the recall of information previously presented or assigned in the articles which are read.

(Cronin & Myers ,1997 ; Large , Behesti , Breuleux & Reaud, 1996; Tennenbaum , 1998) .

Multimedia also has potential strengths when used appropriately. Newby et al. listed the following advantages of multimedia for instruction:

- Multiple and active learning modalities.
- Accommodation of different learning styles and preferences.
- Effective instruction across learning domains, including affective and psychomotor (with simulations, case studies, and other representational and interactive uses), promoting development of higher-order thinking skills, and concept formation.
- Realism, especially when coupled with graphics and video.
- Individualization, with the use of computer branching capabilities and CML (computer-managed learning).
- Consistent experiences, compared with group-based and face-to-face instruction.
- Potential for high levels of learner control.

(Newby et al., 2000 ,P.108)

Moreover, successful technology generates impressive results for students, including improvement in their achievement , attitude, enthusiasm, and engagement , higher test scores , richer classroom content, and it also improves language learning student retention . Hundreds of studies have shown positive benefits from the use of technology, so the use of technology has resulted in educational gains for all students regardless of their age, race, parental income, or other characteristics. Students not only performed well on standardized tests , but they also developed a variety of competencies not usually measured. They explored and represented information dynamically and in many forms they became

socially aware and more confident , communicated effectively in complex processes, became independent learners , self-starters and knew their areas of expertise and shared that expertise spontaneously. (Dorothy and Plass, 1996.)

Therefore , creating multimedia documents is a rewarding task , and so the Center for Highly Interactive Computing in Education [<http://hi-ce.eecs.umich.edu/>] provides some excellent examples of interactive multimedia documents designed to be used by teachers.

1.1.3 Multimedia obstacles

Despite the fact that multimedia involves several benefits , its application faces some obstacles that have limited its widespread use. These obstacles arise in part from the fact that multimedia applications, even if instituted carefully and with the intention of altering the learners' experiences, are an example of change and innovation, and so may stimulate resistance . Some of these obstacles are :

- Hesitance on the part of teachers to see materials transformed.
- The fear felt by users who are staff and learners over the level of technical knowledge needed to get involved.
- The need of many teachers for special training , which may or may not be conveniently available to use multimedia effectively.
- The significant challenge and expense of "adapting and transforming material intended for traditional delivery methods into new media" .

(Helm & Clements, 1996, p.135).

Regardless of the obstacles that face multimedia , it includes several advantages and it is expected that multimedia interaction is also useful in the sector of education.

1.1.4 What is multimedia interaction ?

Interactive multimedia weaves five basic types of media : text, video, sound, graphics and animation into the learning environment. In addition, interactive media describes the new wave of computer software that primarily deals with the provision of information. Multimedia component is characterized by the presence of text , pictures , sound animation and video, some or all of which are organized into some coherent program , and it refers to the process of empowering the user to control the environment usually by computer. (Phillips , 1997 ,P. 8 .)

In interactive applications, the user can interact with the machine by means of several devices, such as keyboard numeric key pad , mouse , trackball , touch screen , pen – based mouse , and infrared pointer. (Villamil , Cassonava and Medina , p.13)

1.1.5 Advantages of multimedia interaction in education

Because the mode of learning is interactive and not linear, it offers the teachers many benefits including: Satisfying educational objectives, increasing students understanding, demonstrating events, showing places and conducting experiments which would otherwise be impossible . Computer based multimedia needs the same degree of interactivity that a school exercise book, or a laboratory experiment has, so educationists have shown that certain forms of learning becomes easier, and is retained more permanently if the learner participates in some ways with the learning material . For some applications , the sense of interactivity is aided by the ability to deliver a moving picture, or a sound very quickly, so that a sense of two- way human participation can be generated. <http://encyclopedia.jrank.org/articles/-Multimedia-in-Education.html>

In contrast to the traditional, non-interactive counterparts, interactive dynamic visualizations allowed users to adapt their form and content to their individual cognitive skills and needs, so interactive features allowed for intuitive use without increasing cognitive load, and led to more efficient forms of learning. (Schwan and Riempp, 2004, P. 293-305 .)

Applying Apple Classroom Of Tomorrow project revealed that students who used computers extensively would not become ‘brain-dead’ or less social by looking at the computer screen all day . They did not become socially isolated or bored by the technology over time. They wrote well and were able to complete unites of study rapidly. Their academic productivity did not suffer and in some cases improved. They had positive changes in their behavior, becoming more responsible of their own learning . ACOT <http://www.info.apple.com/education>

Depending on the perspective of the previous researchers , it can be said that the use of multimedia interaction is a useful means in the education sector .

1.2 Statement of the problem

The researcher has been teaching in a public school for years . She wants to find whether technology and computer application can develop and improve students' English language skills , especially that computers have become so widespread in schools and homes and their uses have expanded so dramatically that the majority of language skills can be implemented by using them. Therefore , by conducting this study the effects of using multimedia interaction in developing the English language skills will be revealed.

1.3 Purposes of the study

This study tries to indicate the effects of using multimedia interaction in conveying and discussing materials . It contributes to the understanding of multimedia and strategies of improving students' learning . It also aims to discover if there is a difference between the use of multimedia interaction in teaching English and the traditional way. Moreover, it determines whether or not technology intervention with teacher input would improve the English language skills of the 11th grade more than made by students who learn in a traditional way . It seeks areas in which computer could advantageously be used as an aid in teaching . It also throw light on the importance of multimedia technology in teaching

which does not only focus on presentation but also on doing. It attempts to draw the attention of syllabus designers toward using multimedia technology in our schools to improve and develop language learning among the students. It is expected that this study will be helpful to teachers who are likely to develop their own strategies of using multimedia interaction in teaching. It also works out suggestions of how the computer may help the students.

1.4 Research question

This study attempts to answer the following major question:

Is there an effect of using multimedia interaction in teaching English language skills of the 11th grade students?

From this major question the following sub-questions were derived:

- Is there a statistically significant difference in the students' achievement of the 11th grade in the English language skills due to the use of multimedia interaction?
- Is there a statistically significant difference in the students' achievement of the 11th grade in the English language skills due to the students' gender?
- Is there a statistically significant difference in the students' achievement of the 11th grade in the English language skills due to the interaction between the use of multimedia interaction and the students' gender?

1.5 Research hypotheses

To answer the previous questions the following hypotheses were formed.

- There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the use of multimedia interaction.
- There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the students' gender.
- There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the interaction between the use of multimedia interaction and the students' gender.

1.6 Significance of the study

The importance of this study lies in the fact that it sheds light on the importance of using technology and multimedia interaction in teaching English language skills of the eleventh Grade students, and it helps students who have some learning difficulties to learn English.

Multimedia technology in teaching doesn't only focus on presentation, but also on doing. On the other hand, cognitive approach emphasizes learning as an interconnected process, with the students actively involved in mediating learning.

This study is also going to draw the attention of the ministry of education toward the importance of using multimedia technology in our schools to improve language skills

among the students . Moreover , it is expected that this study will be helpful to teachers who want to develop their own strategies of using multimedia interaction .

1.7 Limitations of the study

- The study was limited to the eleventh scientific grade in Abu-Dis secondary school for girls and to the Arab Institute for boys.
- It was implemented in the second semester of the scholastic year 2009 / 2010.

1.8 Definition of terms

Text

Out of all of the elements, text has the most impact on the quality of the multimedia interaction. Generally, text provides the important information. It acts as the keystone tying all of the other media elements together.

<http://encyclopedia.jrank.org/articles/pages/6733/Elements-of-Multimedia-in-Education.html>

Sound

Sound is used to provide emphasis or highlight a transition from one page to another. Sound which is synchronized to screen display enables teachers to present lots of information at once. This approach is used in a variety of ways which are based on visual display of a complex image paired with a spoken explanation. Sound which is used creatively becomes a stimulus to imagination. A great advantage is that the sound file can be stopped and started very easily.

<http://encyclopedia.jrank.org/articles/pages/6733/Elements-of-Multimedia-in-Education.html>

Video

Video is the representation of information by using the visualization capabilities of video can be immediate and powerful. It is the ability to choose how we view, and interact with the content of digital video that provides new and exciting possibilities for the use of digital video in education. It helps in placing a theoretical concept into a context . It can stimulate interest if it is relevant to the rest of the information on the page. It can also be used to give examples of phenomena or issues referred to in the text . Video clips can be used to tell readers what to do next. One of the most compelling justifications for video may be its dramatic ability to elicit an emotional response from an individual. The use of video is appropriate to convey information about environments that can be either dangerous or too costly to consider or recreate in real life, so real life situations can be better understood via video. (Mishra and Sharma , 2005, p. 5)

Animation

Animation is used to show changes in a state over time, or to present information slowly to students . It can shorten learning times by showing dangerous , rapid or rare events , it increases interest and holds attention better than text or audio. Animations are primarily used to demonstrate an idea or illustrate a concept. (Szabo ,1998)

Graphic

Graphics provide the most creative possibilities for a learning session. They can be photographs, drawings, graphs from a spreadsheet, pictures from CD-ROM, or something pulled from the Internet. With a scanner, hand-drawn work can be included. The capacity of recognition memory for pictures is almost limitless. The reason for this is that images make use of a massive range of skills: color, form, line, dimension, texture, visual rhythm, and especially imagination. (Koumi, 1994,pp. 41-57)

CALL

CALL is used by Taylor to refer to computer assisted language learning . (Taylor , 1980)

1.9 Summary

The foregoing analysis attempts to show that using multimedia interaction and technology in classrooms tends to be informal in spite of its importance on students' motivation and ability toward learning languages. The up to date trend in language teaching should only be focused on the students' needs , and should be designed in a clear and well organized way in order to achieve the learning goal . Consequently, the researcher tries to shed light on the importance of using multimedia interaction as a model of teaching .

Chapter 2

Review of literature

This chapter deals with the review of related literature . The researcher reviews the available literature which is related to the variables of the study . The studies reviewed in this part include the theoretical and empirical ones on multimedia .

2.1 Behaviouristic CALL

The first phase of CALL conceived in the 1960s and 70s was based on the –then dominant behaviouristic theories of learning . Programs of this phase initiated repetitive language drills and can be referred to as drill and practice .Drill and practice courseware is based on the model of the computer as tutor (Taylor, 1980) . This explains in part the fact that CALL drills are still used today depending on the rationale which is as follows :

- Repeated exposure to the same material is beneficial or even essential to learning .
- Computer is ideal for carrying out repeated drills since the machine doesn't get bored with presenting the same material and since it can provide immediate non-judgmental feedback .
- Computer can present such material on individual basis, allowing students to develop at their own abilities.

2.2 Computer as a tool

The most important current technologies are computers, communication systems, including Internet connections , interactive videodisk and CD-ROM systems which provide a learning environment in which problem solving and intellectual inquiry can flourish .Technology allows students to work at their own pace and encourages them to take initiative and learn independently. Computer-based instruction is becoming increasingly popular in the classroom, particularly because the latest technological advancements allow for visually rich and interactive environments. (Moos and Marroquin, 2010)

As computer technology becomes more accessible, learners increasingly encounter products which are classified as multimedia documents which are used in electronic format and can include text, sound, graphics, animation, video, color, and interaction with the user. Some researchers reserve the term multimedia for electronic documents that have an intrinsic linear design (e.g., Power Point or ClarisWorks slide shows) and use the term hypermedia to refer to documents that incorporate a planned non-linear organization (e.g., Digital Chisel, Hyper Studio, or Micro Worlds projects). <http://www.cast.org/stsstudy.html>

2.3 Word processing

The most common use of computer as a tool is word processing . High quality programs like Microsoft Word can be useful for certain academic or business settings (Healy and Jehnson,1995).

2.4 Instruction – Independent Instruction

Heinich (1989) indicated that media can be effectively used in informal education situation where a teacher is not available or is working with other students . In the informal education , media such as Video cassettes and computer-based media can be used by trainees at the work site or at home . In some instances, an instructor may be available for consultation via telephone . He highlighted the advantages of computer –based instruction , indicating that computer can be viewed generally as a tool for enhancing instruction through CALL . It is the interactive nature of computer-based instruction that underlies most of its advantages. Some of these advantages are :

- Simply allowing students to learn at their own time, saving conventional classroom instruction.
- Computer- based instruction gives the students some control over the rate and sequence of their learning (individualization) .
- High –speed personalized responses to learners' actions provide high reinforcement.
- The patient , personal manner that can be programmed provides a more positive effective climate , especially for slower learners .
- Colour ,music, and animated graphic can add realism and appeal to drill exercises , laboratory activities , simulation ,etc.
- Memory capacity allows performance to be recorded and used in planning the next steps .
- Computer can provide coverage of a growing knowledge base associated with the information explosion . More information is put easily at the instructor's disposal ,and computer based instruction provides a broad diversity of learning experiences .

2.5 Theoretical studies

Researchers critically examine interactive multimedia as a tool for education and training in various setting . They make an attempt to build a theoretical understanding based on experience and research . All the pictures projected by them are successful implementation stories of multimedia , and how it is useful as an educational tool .(Lachs , 2000; Elsom Cook, 2001; Low et al, 2003 ; Reddi & Mishra ,2003.)

Domagk et al (2010) wrote an article to clarify the concept of interactivity. They presented a unifying model that included the user, the learning environment, a system of connections and concepts that together make up interactivity. Such model could help inform research, discussion, and design decisions on interactive multimedia instruction.

Thomas (2006) wrote a paper in which he focused upon the application of the multimedia architecture ‘QuickTime’ for developing pedagogically sound interactive Learning Objects to support the teaching of the principles of Audio Engineering.

Students have higher- order thinking in spoken language when they use an interactive multimedia program . (Herrington and Oliver , 1999)

In teaching languages , using technology has distinct advantages that relate not only to language education preparing students for today's information society , but they are also powerful tools for assisting teaching. (Wang , 2005)

Art George (2007) explained in his essay " Imagining Tomorrow's Future Today" how IT has moved to a place where new technologies are not only replacing older ones but are also interweaving themselves with other technologies as well as the social and economic systems that support them .

Mayer (2001) , quoted in Barbara (2006) , defined multimedia learning . His examination of multimedia on learning based on how the human mind works to process verbal and visual information has produced important insights about multimedia and learning. He suggested seven principles, based on empirical evidence from his ongoing research on multimedia and actual learning. These principles not only describe the various impacts of multimedia on learning, they also constitute a good basic primer for instructional designers working with multimedia . For him, students not only learn better from words and graphics or pictures than from words alone, but they also learn better when corresponding words and pictures are presented near rather than far from each other on the page or screen. They learn better when corresponding words and pictures are presented simultaneously rather than successively , when strange words, pictures, and sounds are excluded rather than included and from animation and audible narration than from animation and on-screen text.

He stated that, " Active learning occurs when corresponding verbal and pictorial representations are in working memory at the same time ." (Mayer , 2002, p. 60). According to him , a multimedia instructional message is a presentation involving words (such as spoken or written text and pictures (such as animation video , illustrations , and photographs) in which the goal is to promote learning. (Mayer , 2002 , p.56)

Mayer's seminal work , Multimedia learning (2003) is rich with research on how people learn through various multimedia instructional messages.

For Barbara (2006), instructional interactivity is a necessary component in the design of multimedia instruction.

Wald (2006) stated that lectures can present barriers to learning for many students and although online multimedia materials have become technically easier to create and offer many benefits for learning and teaching, they can also be difficult to access, manage, and exploit. This presentation explain and demonstrate how automatic speech recognition can enhance the quality of learning and teaching and help ensure that both face to face learning and e-learning is accessible to all through the most effective production of synchronized and captioned multimedia.

Allen (2003) stated that instructional interactivity is interaction that actively stimulates the learner's mind to those things that improve ability and readiness to perform effectively.

Backer (1993) stated that with the growing presence of computer in elementary schools' classroom , many teachers find themselves with a fairly new technology and a growing collection of CD talking books , but little guidance on development appropriate practice . It

is important that educators of young children begin to grapple with the use of CD-ROM talking books with youngsters.

Huang (2004) stated that Modern research has broadened scientific knowledge and revealed the interdisciplinary nature of sciences. For today's students, this advance translates to learning a more diverse range of concepts, usually in less time, and without supporting resources. Students could benefit from technology-enhanced learning supplements that unify concepts and are delivered on-demand over the Internet. Such supplements, like imaging informatics databases, serve as innovative references for biomedical information, but could improve their interaction to support learning. With information from these digital datasets, multimedia learning tools could be designed to transform learning into an active process where students could visualize relationships over time, interact with dynamic content, and immediately test their knowledge. This approach bridged knowledge gaps, fostered conceptual understanding, and built problem-solving and critical thinking skills which are all essential components to informatics training for science and medicine. Additional benefits include cost-free access and ease of dissemination over the Internet or CD-ROM.

CD-ROM talking books, is an interactive, digital version of that employ multimedia features such as animation, music, sound effects, highlighted text and modelled fluent reading. They offer a new venue for engaging students with stories. For example, much-loved children's stories such as Steblaluna (1996) and Seuu's (1995) literally came to life as the stories are told in a multimedia presentation through fluent, expressive text narration and the animated performance of story characters who talk, sing, move and dance across the computer screen. Many talking book screens are interactive because the software allows children to use the mouse to access words that are pronounced, passages that are reread, illustration that become animated, and special effects that produce visual or auditory responses. (National Association for the Education of Young Children, 1992).

A substantial research which supported the effectiveness of information technology-assisted project-based learning (IT-assisted PBL) showed that when IT-assisted PBL is used in a constructive and cooperative learning environment, students learn more and retain their knowledge better. Moreover, students learn the content area being studied. Because this approach to teaching and learning is significantly different from the "stand and deliver" didactic approach used by many teachers, it tends to require a significant amount of professional development for its effective implementation. (Moursund, 1999).

Najjar (1998) indicated that Multimedia user interfaces combine various media, such as text, graphics, sound, and video, to present information. Because of the improvements in technology and decreases in costs, many human factors engineers will soon be designing user interfaces that include multimedia. Many educators, parents and students believe that multimedia helps people to learn, so one popular application of this technology will be the field of education. The purpose of his paper was to describe empirically the principles that multimedia user interface designers can employ to create applications that improve the likelihood that people will learn. The principles are derived from studies conducted in a wide variety of fields, including psychology, computer science, instructional design, and graphics design and focus on educational multimedia applications.

Frear and Hirschbul (1999) stated that the use of interactive multimedia enhanced problem – solving skills . Mc Farland (1996) concurred with these studies , conducting that the proper use of multimedia can enhance learning .

Swan (1999) analyzes a number of sets of national standards in various disciplines. Her article contains a summary of the IT-related standards from a language perspective.

A report from the U.S. Department of Education (1999) contained several papers focusing specifically on multimedia. In general, these papers indicated that the research reports supported the use of multimedia in IT-assisted Project Based Learning (PBL).

Blumenfeld et al. (1991) provided an excellent summary of the research literature supporting PBL.

Sandholtz et al. (1997) provided a strong evidence of the success of IT-assisted (PBL) in the Apple Classroom of Tomorrow schools in which students had access to IT, both at school and at home, and so there was a strong research evidence that in the hands of an appropriately prepared teacher, IT-assisted (PBL) works. Multimedia based learning ((PBL) is an excellent vehicle for implementing a number of different research which supported approaches to improve education.

Schank and Cleary (1995) stated that integrative approaches to CALL(computer assisted language learning) are based on multimedia computers and internet multimedia technology which are the two important technological developments of the last decade and are exemplified today by the CD-Rom that allows a variety of media (text ,graphic ,sound, animation and video) to be accessed on single machine .What makes multimedia even more powerful is that it also entails hypermedia . This means that multimedia resources are all linked together and that learners can navigate their own path simply by pointing and clicking a mouse.

Samuels (1997) suggested the ways children could engage in various levels of supported, contextualized and repeated readings . when children are invited to interact in different ways with CD-ROM talking books on multimedia accessions, it is possible that they will have unique opportunities to develop comprehension and fluency that are similar to those benefits reported for repeated readings of traditional text . Students may need to be reminded that the focus on oral reading is to understand and express the meaning of the stories .

labbo & Ash (1998) indicated that children are likely to note that the formatting, illustration and arrangement of the text on the screen are qualitatively different from the story as told on the printed page. Children should have many opportunities to discuss their insights. These activities may help children build among complex schema for the conventions of CD-ROM talking books and digital story structure.

Many commercial products for language teaching are currently available, but good courseware should be focused only on the students' needs and should be designed in a clear and well organised way in order to achieve the learning goal . The available software packages are often too rich on multimedia (Wats,1997).

Hemard (1997) stated that the importance of a well designed learning environment and interface, as well as careful consideration of the learners needs are very important matters to consider in the early stages of the design process.

Rosenthal (1994) discussed how multimedia aids in the absorption and utilization of information. Example of multimedia applications in business, education and other fields were presented. Users of the programs presented tend to find that multimedia is a successful learning tool in academic and corporative training and marketing. This paper showed how multimedia has the potential to be an important, vital and growing information tool.

Wang (1976) defined computer – based education as a medium for communication of information than a coherent instructional plan or approach. The term computer –based education has in common usage come to connote simply some forms of instructional in which students interact in real time with materials presented under direct control of an electronic computer. Examination of the history of development of computer usage in education suggests that this outcome was probably not entirely intentional. Hypermedia provides a number of advantages for language learning. First of all, a more authentic learning environment is created since listening is combined with seeing, just like in the real world. Secondly, skills are easily integrated since the variety of media makes it natural to combine reading, writing, speaking and listening in a single activity. Thirdly, students have great control over their learning since they can not only go at their own pace, but they also go through their own individual path, going forward and backward to different parts of the program.

2.6 Empirical studies

Animations and videos are often designed to present information that involves change over time, in such a way as to aid understanding and facilitate learning. However, in many studies, static displays have been found to be just as beneficial and sometimes better. Amael Arguel, and Eric Jamet (2009) conducted a study to investigate the impact of presenting together both a video recording and a series of static pictures. In the first experiment, they compared three conditions: video shown alone, static pictures displayed alone, and video plus static pictures. On average, the best learning scores were found for the third condition. In the second experiment, they investigated how best to present the static pictures, by examining the number of pictures required (low vs. high frequency) and their appearance type (static vs. dynamic). They found that the dynamic presentation of pictures was superior to the static pictures mode, and showing fewer pictures low frequency was more beneficial. In addition, the findings supported the effectiveness of a combination of instructional animation with static pictures. The number of static pictures, which were used, was an important moderating factor.

whbeh (2009) studied the role of adopting e-enabled approach in chemistry teaching and learning. The study aimed at revealing the role of adopting the e-enabled approach in chemistry learning, in addition to providing a comprehensive model in designing, developing, delivering and evaluating an e-enabled curricula. The study revealed that: there was a significant positive effect

of the e- enabled approach on the students' performance in the chemical reaction units . The positive effects of the e- enabled approach were on the students' performance and attitude of all levels towards chemistry . Students were interested due to its advantages such as flexibility and enjoyability , but they found some disadvantages of this approach such as technical problems .

Dalacosta et al . (2009) conducted a study in which reported research findings on the use of animated cartoons in a multimedia application meant to evaluate their effectiveness in supporting teaching and learning in science. The researchers have developed a cartoon-style multimedia application whereas animated cartoons were designed from scratch using appropriate programs. The study was carried out in various elementary schools of Athens, Greece, and (179) pupils aged 10–11 years participated in it . The research results provided evidence that the use of animated cartoons significantly increases the young students' knowledge and understanding of specific science concepts, which are normally difficult to comprehend and often cause misconceptions to them.

Korakakis et al . (2009) made a research in which they aimed to determine whether the use of specific types of visualization (3D illustration, 3D animation, and interactive 3D animation) combined with narration and text, contributed to the learning process of 13- and 14- years-old students in science courses. This exploratory study was carried out with (212) fifth grade students in Greece and utilized three different versions of an interactive multimedia application called “Methods of separation of mixtures”, each one of them is different from the other two in a type of visuals. Results indicated that multimedia applications with interactive 3D animations as well as with 3D animations increased the interest of students and make the material more appealing to them. Findings also suggested that the most obvious and essential benefit of static visuals (3D illustrations) was that they left the time control of learning to the students and decreased the cognitive load.

Susila (2008- 2009) conducted a study whose aim was to develop writing recount text material by using interactive multimedia for the eighth grade students . The sample of the study was randomly chosen and included (870) English students at Semarang . The students were distributed in (21) classes of three grades . The researcher tried to answer three questions. The first one was about the eighth grade students' attitude toward and opinion about the materials and the interactive multimedia approach developed in that study during teaching and learning process . The second one was about the contribution of teaching a written recount text by using interactive multimedia . The third one was about the appropriateness of the materials and interactive multimedia in the teaching of English to the students of the eighth grade. Results indicated that all students seriously joined the teaching and learning of written recount text ,they became courageous to ask and discuss in team work saying that they could understand easily , and commented that multimedia interactive eased them in understanding the materials and was interesting .

Arkun and Akkoyunlu (2008) conducted a study in which multimedia learning environment was examined according to the analyze, design, develop, implement , evaluate instructional design model and the effect of achievement of the environment and students' opinions on the learning environment was observed. The sample of the study was (85) fourth grade primary school students, consisting of (50) females and (35) males. Pre-test and post-test procedures were applied. Findings indicated that multimedia learning environment positively affects achievement.

Bruce Homer, Jan Plass and Blake (2008) conducted two studies in which they examined the use of video in multimedia learning environments. In the first one participants (N = 26) viewed one of two versions of a computer - based multimedia presentation: video, which included a video of a lecture with synchronized slides, or no video, which included the slides but only an audio narration of the lecture. Learning, cognitive load and social presence were assessed, but a significant difference was found only for cognitive load, with video experiencing greater cognitive load. In the second one, students (N = 25) were randomly assigned to either video or no video condition. Background knowledge and visual / verbal learning preference were assessed before viewing the presentation ; whereas learning cognitive load, and social presence were assessed after viewing. No significant differences were found for learning or social presence. But, a significant visual / verbal learning preference by condition interaction was found for cognitive load. low visual - preference students experienced greater cognitive load in the video condition, while high visual-preference students experienced greater cognitive load in the no video condition .

Evangelos and Panagiotis (2008) conducted a study whose aim was to discover the differences in attitudes of Greek physical education students towards the subject of computers in comparison with their involvement in physical activities (PA). The sample consisted of (165) freshmen students, (93) males and (72) females. Each student received a diary where s/he should write down his/her daily physical activities for (26) days. The diary was related to the computer usage and the occupation with physical activity. Results indicated gender differences on two factors, “affect” and “perceived usefulness”. No gender differences were indicated on (PA). The students spent more of their free time on computer usage than doing a (PA). The study supported the results on gender differences and indicated that students turn into computer usage rather than enjoying other activities.

Munzer , Seufert and Brunken (2008) conducted a study in which learners attended to a system-paced multimedia presentation in which a verbal–auditory explanation was concurrently synchronized either with animation, with static core pictures, or with enriched static pictures that showed additional intermediate steps and arrows indicating motion. Results demonstrated better learning success with animations and with enriched static pictures than with static pictures. Special abilities were not substantively related to learning success with animations or with static pictures, but they played a crucial role for learning success with enriched static pictures. It was concluded that active visual–special processing was recruited with enriched static pictures. With animations, learning was truly facilitated by external support for visual–special mental processing.

Ik Park ,Gyumin Lee and Kim (2008) Conducted a study whose aims were to examine the effects of two types of interactive computer simulations and of prior knowledge levels on concept comprehension, cognitive load, and learning efficiency. Seventy students were sampled from two elementary schools. They were divided into two groups (high and low) based on prior knowledge levels, and each group was divided into two treatment groups (a low - interactive simulation group and a high-interactive simulation group). The dependent variables were concept comprehension, cognitive load, and learning efficiency. Results showed that students with high prior knowledge levels and high-interactive simulations had significantly increased comprehension scores, decreased cognitive load scores, and had high learning efficiency. On the other hand, among students with low prior knowledge

levels, the low-interactive simulation group did not demonstrate significantly increased comprehension scores, but they showed lower cognitive load scores and higher learning efficiency than the high-interactive simulation group.

Thomas Mackey and Jinwon (2008) conducted a case study whose purpose was to better understand the relationships between Web usability and students' perceived learning in the design and implementation of Web-based multimedia (WBMM) tutorials in blended courses. It focused on the use of multimedia as a replacement for classroom instruction rather than as a complement to teaching practices in courses that meet face-to-face. This study analyzed data collected from (41) undergraduate students who accessed a series of (WBMM) tutorials to learn Web design in an upper level undergraduate information science course that combines both in-class and online instruction. Findings suggested that multimedia instruction was an effective approach to teaching Web design in blended learning environments that include both face-to-face and Web-based resources.

Arindam et al. (2007) conducted a study to gauge the effectiveness of different multimedia combinations, namely: text, audio and synchronized text and audio, video and synchronized text, for procedural-based tasks to support web-based learning for a senior-level production and for planning and controlling course. Data were collected on performance, process and subjective measures. Analysis of these learning systems throw new light on the effectiveness of the different multimedia combinations to improve web-based learning of procedural tasks. The most important finding of the study is that user performance was dependent on the type of multimedia combination and on the type of learning task in terms of complexity. For low difficulty procedural tasks, the choice of multimedia was not critical for either performance or process efficiency. When the procedural tasks were complex, a combination of audio, video and synchronized text yields the best results both in terms of learning performance and process efficiency measured in terms of amount of time spent on viewing the modules and the module accessing frequency. Another important finding was that an easy-to-use system does not imply an efficient learning system. The study helped recommend design guidelines for the most appropriate type of multimedia to be used in designing web-based asynchronous learning systems for different levels of procedural tasks.

In the academic year (2006 - 2007) Al-Quds Open University held a project which involved applying technology in teaching English as a foreign language as well as teaching English language teaching methodology. The project was the result of the cooperation between the British Council, Al-Quds Open University, the University of London and the IATEFL association. It consisted of a number of videoconference sessions. Findings showed that using technology in teaching was a favourable thing which had to be encouraged and taught despite all possible problems that might be encountered. The added education values for doing that were worth the trouble and the effort that would be spent on it. (Birzeit university, 2009)

Schroder (2006) conducted a study to evaluate the effectiveness of learning in a multimedia environment and to address other factors as the differences in students' learning style, attitude towards computers, and background knowledge. A sample of (60) undergraduate students was used. Participants were enrolled in four sections of an introductory educational technology course. The distribution of males to females was

23.3% males and 76.7 % females . Findings showed that there was no differences in test scores between the multimedia and the no multimedia groups .

Evans and Nicola J. Gibbons (2006) conducted a study whose aim was to determine whether the addition of interactivity to a computer - based learning package enhanced the learning process. A sample of (33) (22 male and 11 female) undergraduates on a business and management degree used a multimedia system to learn about the operation of a bicycle pump. The system consisted of a labeled diagram of the pump, followed by a description of twelve stages in its operation. The sample was randomly divided into two groups and used either an interactive (I) or a non-interactive (NI) version involving both images and text. The(I) system differed from the (NI) system by the incorporation of control of pace, self-assessment questions and an interactive simulation. Students then undertook two different types of tests to assess their learning: one was designed to evaluate their memory by recalling facts from the lesson, and another designed to assess their understanding through solving novel diagnostic problems. Students using the (I)system outperformed those using the (NI)system in the problem-solving test, and needed less time to complete both memory and problem-solving tests. This result was consistent with the hypothesis that interactive systems facilitate deep learning by actively engaging the learner in the learning process. This suggested that educational designers who seek to foster deep learning should adopt the incorporation of interactivity as a design principle.

Zheng and Zhou (2006) conducted a study in which they investigated the impact of recency effect on multiple rule-based problem solving in an interactive multimedia environment. Forty-five college students were recruited and assigned to two groups : synchronized and unsynchronized interactive multimedia groups based on their special ability score. Results showed that students in the synchronized interactive multimedia group outperformed their counterparts in the unsynchronized interactive multimedia group in terms of response time and test scores. Results also indicated that low special ability learners in the synchronized interactive multimedia showed an improvement in problem solving.

Zhang, et al. (2006) indicated that interactive video in an e-learning system allows proactive and random access to video content. Their empirical study examined the influence of interactive video on learning outcome and learner satisfaction in e-learning environments. Four different settings were studied: three were e-learning environments with interactive video, with non-interactive video, and without video. The fourth was the traditional classroom environment. Results of the experiment showed that the value of video for learning effectiveness was contingent upon the provision of interactivity. Students in the e-learning environment that provided interactive video achieved significantly better learning performance and a higher level of instructional video into e-learning systems. Learners were more satisfied than those in other settings. Students who used the e-learning environment that provided non-interactive video did not improve either. Findings suggested that it might be important to integrate interactive video.

Waxman and Michko (2003) conducted a meta analysis of the effectiveness of teaching and learning with technology on students' outcome . They analysed (42) researches .The

result showed that (93%) of those researches proved the positive effectiveness of teaching and learning technology on the students' outcomes.

Fuqha (2002) studied the effect of multimedia CD-ROM based software on English language skills of the third grade students at Private Schools in Nablus Area. The sample of the study which was randomly chosen consisted of (36) male and female students from St. Joseph's Basic school . This sample was divided into two groups : one as experimental group and the other as a control group. Each group consisted of (18)students . Results showed that the use of CD-ROM based software as a technique to teaching third grade students English language skills proved to have significantly positive effects on the students' achievement . Results showed that the experimental group outperformed the control group on the achievement test . Results also revealed no significant differences in students' achievement test scores due to the interaction of group with sex .

Passig and Levin (2001) Conducted a study in which they assumed that multimedia design contributed to the interest of learning by young children. Thirty children were exposed to interactive multimedia stories. With the help of the Pollimeter tool, they examined previous experience with computers, level of covert time-on-task, and level of satisfaction with various interfaces. Findings indicated that different interfaces had different impact on boys and girls . Boys who were more familiar with computer games not only showed a greater covert time on task than girls, but they also showed a higher level of satisfaction . Younger boys and girls were found to show higher satisfaction than older children engaging computer –based and computer-mediated interactions facilitates learning(Bork 2001) .

Al Rub (2001) studied the effect of computers on the direct achievement and retention of basic tenth graders of the unit of the universe and its main components . This study was designed to investigate the computer's effect on the direct achievement and retention for the basic tenth grade students in the unit which is about " the universe and its main component " .The sample of the study compromised (91) students – (46) boys and (45) girls .These students were randomly divided into (2) groups one as control group and the other as experimental group. Results showed that there were significant differences in direct achievement attributed to teaching method and there were no significant differences between mean scores in direct achievement , attributed to gender and inter -action between gender and method . Students who were taught with computer instruction in eleventh grade showed significantly higher scores in retention achievement than students who were taught traditionally . Also there were significant differences in retention achievement attributed to gender , but there were no significant differences between scores in retention achievement attributed to interaction between method and gender .

The study of Shih Jen (2000) showed some ways of how students adjust themselves in learning English with the aid of multimedia computers.

Redmond (1999) studied teachers perception of the training that they received to use multimedia in classroom and laboratory setting , and teacher ' perception of the instructional effectiveness of the software on the curriculum. It sought to compare teachers' perception of multimedia based software on their instructional setting that consisted of either classroom or laboratory setting . Results showed no significant differences between classroom and laboratory teachers' perception on the usefulness of training .

Researchers from the MENO (multimedia in Education and narrative organization) found that learners working on interactive media with no clear narrative structure display learning behaviour that is generally unfocused and inclusive. They designed an experimental study with three versions of material on a CD-ROM with different degrees of narrative structures and tested the different versions in classroom setting. The CD-ROM offered video sequences for collecting material as well as questions to guide the exploration. Their conclusion points to the importance of designing interactive multimedia environments (Plowman et al., 1999)

Coy (1999) studied the relationship between media, motivation, and learning in a computer-aided instruction (CAI) environment. Eight undergraduate students at a southern California University participated in this study. Results showed that no differences in the amount of learning and the level of motivation between the participants in the high and low media groups. There was no difference in the amount of learning among the participants in the high and low motivation groups. Results also showed that motivation didn't mediate the relationship between the amount of media and learning.

Al-mekhlafi (1999) studied the relative effectiveness of two instructional media (CD-Rom and videotape) to identify classroom strategies that facilitate content learning in English. The participants were (48) perceived elementary education majors enrolled in two ESL method courses in a large Metropolitan university. Results showed that CD-ROM users were able to identify more strategies than videotape users; however, there was no difference between groups on perceived knowledge or intention to use instructional media, but there was statistically significant difference between the two groups in ease of use.

Bering (1998) studied the differences in students' understanding and performance among middle school students through traditional methods as compared to integrated multimedia and internet technologies. This was investigated through the development of an integrated unit of one week length in a seventh grade core classroom. The study also looked at the teaching and learning limitation imposed by teachers' lack of technology training and at the technology recourse that were available to teachers. Findings showed that the integration of multimedia and internet technology into the middle school curriculum can enhance student's learning and support students' understanding and application.

Banks (1998) studied how interactive multimedia technology can be used to help teachers learn more about using multimedia composition tools. This dissertation focused on how to develop an effective method of teaching teachers how to use multimedia composition in the classroom. The researcher developed an interactive multimedia application entitled virtual classroom visits (VCV) to teach the teachers how to use multimedia with their students. Results showed that it is possible for teachers to be productive if they have the will and the ability concerning their own learning. The (VCV) program generated new concerns and new uses of multimedia, especially its practical parts. The researcher concluded that the (CVC) program helped teachers understand precisely what is needed to a unit with multimedia composition.

Brett (1997) conducted a comparative study to investigate the effects of the use of multimedia on listening comprehension and on listening performance in a computer-based multimedia environment. It compared learner success rates on comprehension and language recall tasks while using the three different media of audio, video and multimedia. Results of performance on tasks showed more effective comprehension and recall while using multimedia than either audio or video plus pen and paper. A learner questionnaire indicated possible reasons for the greater success of multimedia. Among these are that multi-media-delivered listening comprehension tasks may be more efficient and that ongoing feedback to tasks should improve comprehension.

Schardt (1997) , quoted in Qunoe' (2002) , studied the effect off multimedia CD-Rom literature based software on the reading skills to determine whether or not a technology intervention alone with no teacher input would increase the English language and reading skills of the students more than gains made by students who read paper- based literature . Results showed no statistically significant difference appeared between classrooms suggesting the importance of the teacher in the learning process and students were highly motivated to use the computer more than those who just read the paper-based literature .

Wambugu (1997) studied the effect of using ,hypermedia for foreign language learning at Southern Illinois University at Carbondale .Data assessed the nature of relationship between the use of hypermedia and various students characteristic .Data analysis indicated that there is a significant relationship between the use of Hypermedia and the students' target language .It also indicated that a significant relationship between usefulness of Hypermedia instruction and traditional methods.

Tjaden (1997) performed a study to compare the effects of learning C pointers with aid of an intelligent tutoring system (ITS) on college students , learning with a multimedia tutorial , and learning with lecture only . The multimedia version of the software included sound , animation and hyperlinks . The control group included (38) students . There were two experimental groups . One of them included (42) and the other included (34) students . Results showed no significant differences between the three groups in the amount learned on pointers .However ,some encouraging results were indicated . The multimedia users spent more time learning with their software than the (ITS). Multimedia software received higher rating than the (ITS).

Dorothy Chun and Jan Plass (1996) made a research study to indicate the effects of multimedia annotations on vocabulary acquisition. Their research on second language (L2) vocabulary acquisition revealed that words associated with actual objects or imagery techniques were learned more easily than those without them. With multimedia applications, it was possible to provide, in addition to traditional definitions of words , pictures , videos and different types of information. This article discussed the results of three studies done with (160) university German students using a hypermedia application for reading German texts that contained a variety of annotations for words in the form of texts , pictures, and videos. Results showed a higher rate of incidental learning than expected (25% accuracy on production tests, 77% on recognition tests), significantly higher scores for words that were annotated with pictures , text than for those with video , text or text only, and a correlation between looking up a certain annotation type and using this type as the retrieval cue for remembering words.

Zeanchock (1996) conducted a study to determine how in higher education, teachers who taught introductory computer course and information systems concepts perceived and used complimentary computer – assisted instruction (CAI) that were provided as integrated textbook supplement . A questionnaire was completed by one hundred seventy one instructors teaching with a particular textbook and associated CAI modules . Results suggested widespread acceptance and use of the studied(CAI) modules instructions that had access to the software . The primary reasons for acceptance and use were perceived quality, instructional benefit and current availability of necessary hardware and software to guarantee that students could expand the use of (CAI) in the learning environment . The majority of instructors not only showed that they would like to maintain the text book as the primary instructional delivery tool , but they would also like to see more extensive use of (CAI) as supplements distributed and integrated with additional text books , the quality and availability of (CAI) supplements with text- books appear to be important factors that will impact future text-book adoption –decision .

Boling (1996) conducted a study to determine which one of the following methods : individual learning , cooperative learning or interactive multimedia and lecture –based distance education was the most effective and satisfying . Results indicated that the interactive multimedia subjects made the study session enjoyable . Cooperative learning made the distance education experience more cognitively effective than individual learning or interactive multimedia did . Interactive multimedia made the overall distance education experience more enjoyable than individual learning or cooperative learning . The individual learning group did not learn as much as the cooperative learning group nor enjoyed it as much as the interactive multimedia group did.

Lim (1996) carried out a study to compare the effectiveness of traditional static and computer –assisted dynamic methods in teaching perspective drawing and to investigate if there is any relationship between learning styles and different presentation methods that affect different learning outcomes of perspective drawing . Results indicated that there were no significant differences between the two presentation methods that affected different learning outcomes. It revealed that the use of computer-assisted " dynamic " multimedia presentation method could serve as an effective tool in teaching perspective drawing to learners who are convergent.

Waldman (1995) used a quasi –experimental design to investigate whether there was measurable difference in reading and writing achievement between first graders using multimedia literacy tool and first graders not using the tool . Results indicated that the experimental group outperformed the control group , and the Multi Literature Tool (MLT) could selectively be a powerful tool for enhancing reading , and writing of young learners when there is sufficient exposure to the (MLT) invention and when the independent measures are appropriately aligned with the instruction.

Williamson and Abraham (1995) carried out a particular nature of matter evaluation tests in chemistry to explore the effect of computer animation (cartoon) depicting the particular nature of matter on (400) college students. Results revealed that the experimental group showed significant higher conceptual understanding scores than the control group did .

Bailey et al (1995) carried out a study to measure the effect of the computer clip art and graphical presentation software on the writing process . In particular , the researchers

wondered if the use of these visuals would affect length and sharing compositions . The study examined (25) second graders engaged in a daily writers ' workshop that included brainstorming , story webbing, drafting ,editing, publishing and presenting . Results revealed that computer applications enhanced length and quality of composition ,increased student self-esteem , helped students organizing their thoughts via story-boarding, and got good overall reaction.

Coulter and Stryken(1994) carried out a study at Florida's Stelson University to examine the effect of using professional software on the students learning experience . Professional estate, gift , and well-designed software packages were combined with text material , role playing and research activities to enhance the student's learning experience . Results indicated that software stimulated interest and allowed students to focus on concepts rather than the repetitive mechanical process . It also indicated that instructors could use commercial software to find programs which will ease some of their workload , create a better learning environment , and prepare their students for entry into the real world .

AL-Hamshari (1993) conducted a study to discover the effect of educational computers on the achievement of " eight grade " UNRWA pupils in mathematics Jordan . The sample of the study consisted of (50) pupils. Results revealed statistical significance differences in the performance of the experimental group. This means that the use of computer in teaching maths had an impact on the achievement of pupils.

2.7 Summary

Definitions of multimedia vary in particular but tend to agree in substance.

From the previous reviews of the related literature , the researcher concluded the followings :

Students' reaction to this type of instructional tool is favourable , and students are highly motivated by anything to do with computers . The biggest advantage to this particular technology is that all the students can use the computer at their own level . If the students can use the computer , the activity immediately becomes less tedious and more interesting . By carrying out such a study , the researcher hopes to enrich the empirical studies in the field of English teaching and learning process .

Chapter 3

Methodology

This chapter includes the methodological procedures involved in this study , which are divided into the following categories : A description of population of the study , sample of the study , design of the study , validity and reliability of the test , variables of the study , instrument of the study , statistical design and a summary of the procedures .

3.1 Population of the study

The population of the study consisted of all male and female eleventh grade students in public schools in the directorate of education, Jerusalem Suburbs –Al Ram for the second semester of the scholastic year 2009/2010. The total number of the population of the study was (1602) students.(See appendix one)

3.2 Sample of the study

The sample of the study consisted of (96) male and female students from Abu Dis secondary girls' school , where the researcher is teaching and the Arab institute for boys . This sample was purposely selected and divided into four groups : Two of them as experimental groups : An experimental girl group consisted of (23) students ; an experimental boy group consisted of (25) students, and two of them as control groups : a control girl group consisted of (22) students and a control boy group consisted of (25) students .

This sample represented the normal number of students in each eleventh grade class in this area . All the students were between (16 and17) years old . In addition , they all had the same environmental and educational circumstances .

Table (3 . 1) : Sections of the students of the sample of the study .

School name	Abu Dis Secondary girls' school		Arab institute for boys	
	traditional	experimental	traditional	experimental
Class section	A	B	B	A
Students' number	23	23	25	25

Table (3 . 1) shows the sections of the students of the sample of the study .

Table (3 . 2) : Numbers of the students of the sample of the study .

School name	Teaching method	Number of the students
Abu Dis Secondary girls' school	Traditional group	23
	Experimental group	23
Arab institute for boys	Traditional group	25
	Experimental group	25

Table (3 . 2) shows the number of male in the control group and in the experimental group and the number of female in the control group and in the experimental group .

Table (3 . 3): Total numbers of the students of the sample of the study.

Gender	Number of the students in the experimental groups	Number of the students in the traditional groups
Male	25	25
Female	23	23
Total	48	48

Table (3. 3) shows the total number of both male and female in the traditional group and in the experimental group .

The researcher equalled between the experimental and the control groups before the application of the proposed way of teaching depending on the students' achievements in the first semester of the scholastic year 2009/2010 . Results showed that the two groups were equal before applying the proposed way of teaching.

3.3 Design of the study

The experimental design which appears bellow involves using an achievement test after applying the experiment .

E	O1	X	O2
C	O1		O2

E= Experimental group .

C= Control group.

O1 = Students' achievement in the first semester .

O2= Achievement test for the experimental and the control groups.

X = A proposed way of teaching .

3.4 Variables of the study

Method of teaching is the independent variable in this study , and it has two levels which are using multimedia interaction and the traditional way of teaching (teaching method which is applied at schools). Gender is another independent variable in this study .

The dependent variable is the students' achievement in English language skills.

3.5 Instruments of the study

The researcher used the students' achievement scores of the first semester of the scholastic year 2009 / 2010 in her study , and equaled between the experimental and the control groups on the achievements scores before the application of the experiment.

3.5.1 Achievement test

In order to prepare the achievement test , the researcher analyzed the whole unit that she wanted to explain (This dangerous world) , English for Palestine, 11 student's book . Depending on the table of specification (see appendix 2) , the researcher defined the objectives that she wanted the students to achieve . She determined which topics would be included in the assessment . She also estimated approximately how much time would be spent on each topic . She added up the time spent per topic. Then she calculated the percentage of time spent per topic by dividing the time spent on each topic by the total amount of time . Then she determined how many questions or points would be included in the exam. And estimated how much time students were likely to spend on each item to be certain that students would have the opportunity to answer all questions . This exam was worth (100) points given in one class session that lasted for one hour.

The achievement test was administrated by the researcher immediately after the experiment . It helps the researcher to get feed back about students' progress toward the needed objectives . The experimental and the control groups had the same test . (See appendix two)

3.5.2 Validity and reliability of the test

The valid test is a test which measures exactly what it is intended to measure . It should also be within the students' level .

For validity , the proposed way of teaching and the achievement test were judged with no modification by eight specialized English teachers .

The achievement test was formed depending on the table of specification , so it covered the whole unit .

To establish reliability , the researcher conducted a pilot study on (32) students and they were distributed according to their averages in the first semester to a control group and an experimental group. The experimental group consisted of (16) students and was taught by using multimedia interaction and the control group consisted of (16) students and was taught by the traditional way of teaching. The pilot study was used to help the researcher in the sense that it provided the suitable time to be spent on each activity and the difficulty that might appear . The test was distributed to the control group and to the experimental group.

Table (3 .4): Results for differences on the achievement test between the control and the experimental groups in the pilot study .

Group	Mean	Std. Deviation	t	Sig
Experimental	83.06	5.99	4	0.001
Control	54.18	15.34		

*significant at ($\alpha \leq 0.05$)

Results of table (3 .4) shows the differences on the achievement test between the control and the experimental groups in the pilot study . It indicated that there was a significant difference between the control and the experimental groups in favour of the experimental group .

The test and retest method was used , so after two weeks , the students were retested on the same test . It should be noted that those (32) students were excluded from the sample of the study .The reliability of the test was calculated using pearson's reliability coefficient . The total value which was (0.94) is considered high , and so the purposes were achieved .

3.5.3 instructional message

To carry out her study , the researcher used multimedia interaction which included the use of computer to explain unit eight whose title is (this dangerous world) , English for Palestine, 11 student's book .The instructional message was prepared by some computer

specialists and some specialists in education and teaching to get a suitable instructional message for the students and their abilities . The instructional message should be suitable to convey the given activities and was put on a CD . In explaining the activities , students used the mouse to click the arrow to get explanations of the activities . They could choose which activity to start with because the first page of the instructional message included modules of the activities and the criterion reference test . They were free to choose the sequence of their study and the time to answer the criterion test . Ideas were presented to them in an integrated form of sounds , pictures , texts , and animation of the texts and pictures which were taken from the text book and from the internet . Questions about each activity were provided . Students clicked the arrow to get the correct answers to some questions and evaluated themselves without being afraid of committing mistakes or being criticized . They not only had control over their progress , but they also developed themselves according to their abilities , choosing the way that they wanted to go through .

3.6 The chosen activities are

Reading comprehension.

Vocabularies.

Listening .

Language and Writing .

3.7 Procedures of the study

Out of having problems in teaching English of the eleventh grade , the researcher wanted to design an educational lesson by using computer and multimedia interaction to see if using multimedia interaction could help in solving the problems .

To design the educational message , the researcher looked at different models of designing educational lessons and found that Abed Al Latif Al Jazar 's model for developing educational lesson could help , so she used his model to explain unit eight whose title is (This dangerous world) , English for Palestine, 11 student's book . His model includes five stages to be followed in designing educational lessons . Each stage should be followed before moving to another stage .

3.7. 1 Abed Al Latif Al Jazar 's model:

3.7.1 .1 stage 1 Analysis

Analyzing students' characteristics :

- The number of the students was (23) students in each class and they are between (16-17) years old .

- They were very good students in the sense that they were in the scientific stream and they had the needed skills to learn by using computers .
- They were curious , so they liked to search and to discover new things .
- They liked to analyze , to justify and to comprehend the relationships between things .

3.7.1 .2 Analyzing the educational requirements :

- Students were in need of recalling previous topics about phrasal verbs and modal verbs to help them build on their previous knowledge which helped them in comprehending the new material and made it familiar to them.
- Students needed to know what to do in an emergency and what to do to protect themselves and to be safe .
- Students needed to develop and practice reading skills.
- Students needed to skim to obtain gist and general impression of the given text .
- Students needed to learn new vocabularies .
- Students needed to scan for specific information from the text to answer the given questions.
- They needed to identify the main ideas in the text .
- They needed to extract and synthesize information from different sources.
- They need to join ideas in the text with the ideas presented by the photos (visual aid) .
- They needed to analyze the components of the text including main expressions .
- They needed to infer the authors attitude toward the good results of being able to help in an emergency .
- They needed to deduce the meaning of the unfamiliar words from the text.
- They needed to read with correct pronunciation and intonation .
- They needed to summarize reading text .

3.7.1 .3 Analyzing the resources and the possibilities available for education:

- The student's book (See appendix 3).
- The teacher's book.
- The suitable number of computers in the schools where the experiment would be applied .

According to the obstacles , the researcher found no obstacles in teaching the lessons .

3. 7. 2 Stage 2 Design

3. 7. 2 .1 Designing the audience behavior condition degree :

- To collect vocabularies .
- To review and practice vocabularies .
- To sort vocabularies according to their functions .
- To learn new vocabularies and how to use them .
- To identify the main idea .
- To distinguish main ideas from supporting details.
- To identify the topic , setting of aural text.
- To respond to referential questions based on an aural text .
- To distinguish between implicit and explicit information and relevant and irrelevant ideas in an aural text .
- To extract key information for note taking and summarizing purposes.
- To identify core vocabularies .
- To hear and repeat correct pronunciation and intonation.
- To relate the text to personal experiences , opinions, emotions and evaluation.
- To present grammar for revision .
- To practise choosing the correct language form .
- To practise using language forms correctly .
- To make meaningful sentences .
- To give some practice on using the language accurately and fluently and to convey meaning .

Then designing the sequence of the audience behavior condition degree :

- To collect vocabularies .
- To review and practice vocabularies .
- To sort vocabularies according to their functions .
- To learn new vocabularies and how to use them .
- To identify the main idea .
- To distinguish main ideas from supporting details.
- To identify the topic , setting of aural text.
- To respond to referential questions based on an aural text .
- To distinguish between implicit and explicit information and relevant and irrelevant ideas in an aural text .
- To extract key information for note taking and summarizing purposes.
- To identify core vocabularies .
- To hear and repeat correct pronunciation and intonation.
- To relate the text to personal experiences , opinions, emotions and evaluation.
- To present grammar for revision .
- To practise choosing the correct language form .
- To practise using language forms correctly .
- To make meaningful sentences .
- To give some practice on using the language accurately and fluently and to convey meaning .

3. 7. 2.2 Designing elements of the educational content .

- Some photos to comment on them.
- Simple questions to be answered depending on the students' experiences.

- Highlighted words , four beneficial ideas in the emergency and photos of accidents to be explained .
- Vocabularies taken from previous lesson's reading text .
- Some ideas about dangerous things and advices on how to be away from dangers.
- Some explanations on how to use modal verbs . A colored photo about Ricky and Nadia to help in answering the given questions .
- Some ideas about Bermuda Triangle . Two colored pictures about The Mary Celeste and Bermuda Triangle and some highlighted words to help the students comprehend the given ideas and answer the given questions .
- A picture and some scrambled notes to be continued and rearranged.

3. 7. 2 .3 Preparing the criterion reference test to help students evaluate themselves.

(See appendix four).

3. 7. 2 .4 Choosing the activities , the way students learn the activities and the procedures they would use to achieve the required audience behavior condition degree .

- Each student in the experimental group used one computer and learned alone .

3. 7. 2.5 choosing the educational aids and the instructional materials .

- The chosen activities and the aids that helped in conveying the instructional message were arranged on CD to be used by the students .

3. 7. 2.6 Designing the instructional message using suitable means.

The instructional message was prepared by some computer specialists and some specialists in education and teaching to get a suitable instructional message for the students and their abilities . The instructional message should be suitable to convey the given activities and was put on CD . In explaining the activities , students used the mouse to click the arrow to get explanations of the activities . They could choose which activity to start with because the first page of the instructional message included modules of the activities and the criterion reference test. They were free to choose the sequence of their study and the time to answer the criterion test . Ideas were presented to them in an integrated form of sounds pictures taken from the internet , texts , and animation of the texts and pictures . Questions about each activity were provided . Students click the arrow to get the correct answers to some questions and to evaluate themselves without being afraid of committing mistakes or being criticized . They not only had control over their progress , but they also developed themselves according to their abilities , choosing the way that they wanted to go through .

3. 7. 2.7 Designing the educational events and the elements of the learning process .

Designing the activities, questions , photos which were taken from the internet and from the text book , sounds and the texts that help in achieving the required objects .

3. 7. 2.8 Choosing the procedures through which the activities would be conveyed depending on the available possibilities to achieve the required objectives . (See appendix five) .

3. 7. 3 Stage 3 Production

3. 7. 3.1 Getting the means and the facilities .

3. 7. 3. 2 Using the available means .

Using the available computers to run CDs .

3. 7. 3 . 3 Modifying the available means .

Modifying the available CDs until they became suitable to convey the instructional message .

3. 7. 3. 4 Producing new means .

- Producing the suitable CDs .
- Taking permission from the directorate of education, Jerusalem Suburbs –Al Ram and from the Arab institute for boys to be able to apply the experiment .
- Choosing Abu Dis Secondary girls’ school and the Arab institute for boys because the principals in those two schools were ready to offer help and promised to provide the researcher with all the needed computers and facilities .

3. 7. 4 Stage 4 Evaluation

3. 7. 4 . 1 Experiencing the formative evaluation on a limited range .

Using the pilot study which helped to determine the needed time and to find solutions to the problems that might appear .

3. 7. 4 .2 Experiencing the summative evaluation on a wide range which means to start the learning process and to use the continuing evaluation .

3. 7. 5 Stage 5 use

3. 7. 5 .1 Practical use to the instructional message .

- Students started learning using the computers in the laboratories .
- Teachers kept on watching the students and getting feed back .

3. 7. 5 . 2 Constant evaluation

- Teachers constantly watched the students and evaluated their progress toward the required objects .

Then, the researcher started preparing the achievement test depending on the table of specification , so the researcher analyzed the whole unit that she wanted to explain (This dangerous world) , English for Palestine, 11 student's book . She defined the objectives that she wanted the students to achieve . She determined which topics would be included in the assessment . She also estimated approximately how much time would be spent on each topic . She added up the time spent per topic. Then she calculated the percentage of time spent per topic by dividing the time spent on each topic by the total amount of time . Then she determined how many questions or points would be included in the exam. And estimated how much time students were likely to spend on each item to be certain that students would have the opportunity to answer all questions . This exam was worth (100) points given in one class session that lasted for one hour .

After that , the researcher started preparing the instructional message by asking help from some educational and computer specialists to get a suitable program for the students and their abilities . The instructional message included the use of multimedia interaction to explain unit eight whose title is (this dangerous world) , English for Palestine, 11 student's book . At the same time, the instructional message should be suitable to convey the given activities . Before applying the instructional message , the students were given the objects of each activity and some notes on how to deal with the instructional message . In explaining the activities , students used the mouse to click the arrow to get explanations of some unfamiliar words which were presented to them in an integrated form of sounds pictures , texts , and animation of the texts and pictures . Questions about each activity were provided . Students could click the arrow to get the correct answers of some questions and to evaluate themselves without being afraid of committing mistakes or being criticized . They not only had control over their progress , but they also developed themselves according to their abilities , choosing the way that they wanted to go through .

Before applying the experiment , the researcher conducted a pilot study on (32) students and they were distributed according to their averages in the first semester to a control group and an experimental group. The experimental group consisted of (16) students and was taught by using multimedia interaction and the control group consisted of (16) students and was taught by the traditional way of teaching . The pilot study was used to help the researcher in the sense that it indicated the suitable time to be spent on each activity and the difficulties that might appear . The pilot study lasted for a month exactly from (15/1/ 2010)to (15/ 2/2010) and (20)class sessions were spent. The time duration

for each activity was (4) class sessions .The achievement test was administrated by the researcher to the control and to the experimental groups immediately after the experiment . It indicated that conveying the activities by using multimedia interaction needed less time than the time needed to convey the activities by using the traditional way of teaching , so the researcher used some videos which were related to the topics of the activities . It also indicated that there was a significant difference between the control and the experimental groups in favour of the experimental group .

The test and retest method was used , so after two weeks , the students of the pilot study were retested on the same test . It should be noted that those (32)students were excluded from the sample of the study .The reliability of the test was calculated using pearson's reliability coefficient . The total value which was (0.94) is considered high .

Depending on the results of the pilot study , the researcher started the study. This study was conducted in the second semester of the scholastic year 2009/2010, at Abu Dis Girls' secondary school and at The Arab Institute. During the application of the study , the researcher took down the names of the schools , which had eleventh grade students from the Education Office in Al Ram . The population of the study consisted of all male and female eleventh grade students in public schools in the directorate of education, Jerusalem Suburbs –Al Ram for the second semester of the scholastic year 2009/2010. The total number of the population of the study was (1602) students.

The sample of the study consisted of (96) male and female students from Abu Dis secondary girls' school, where the researcher is teaching and the Arab institute for boys . This sample was purposely selected and divided into four groups : Two of them as experimental group : An experimental girl group consisted of (23) students ; an experimental boy group consisted of (25) students, a control girl group consisted of (22) students and a control boy group consisted of (25) students . To determine the homogeneity of the four groups , the researcher made equivalence between them by making a comparison between the students' achievement scores in the first semester of scholastic year 2009/2010 . The results indicated that they were homogeneous before the application of the proposed way of teaching . The (48) students in the experimental group used (48) computers . The instructional message was put to each computer. Pictures, animation , videos , clear sounds and text which were related to the activities were chosen to help the students to comprehend the ideas presented to them . They used the mouse to click on the arrow to get meaning of the unfamiliar words and the correct answers to some of the given questions which appeared below the activities.

The experimental groups were taught under the direction and the supervision of the researcher for four weeks from (1/3/ 2010)to (1/ 4/2010) . Each activity took (5) class sessions .The researcher taught the girls in the experimental and in the control groups . And another teacher taught the boys in the experimental and control groups. In each time the experimental groups used multimedia interaction to learn the intended activities . That to say twenty class sessions were carried out in four weeks. As for the control groups , they received the same activities by the traditional way of teaching method , which didn't involve using computers . The control and the experimental girl groups were taught by the researcher and the experimental and the control boy groups were taught by another teacher.

The activities were taught in a different, more interesting and attractive way.

The researcher noticed that students were more relaxed. They were no longer afraid of being corrected, judged or watched. And the achievement test was administered by the researcher immediately after the experiment. At the end of the experiment, exactly on April 21th the groups sat for the achievement test that lasted for (50) minutes.

3.8 Black Gain Ratio

This equation was used to measure the effectiveness of the instructional message.

$$\text{Black Gain Ratio} = \frac{(x - y) / (z - y)}{x - y} + \frac{(x - y)}{Z}$$

x : Second semester marks.

y : First semester marks.

Z : Total mark.

The percentage is between (0-2).

The instructional message is considered effective if the percentage is more than (1.2).

The calculated percentage for the male experimental group is (0.7) and for the female experimental group is (0.8).

3.9 Mc Gugian's Gain Ratio

This equation was used to measure the effectiveness of the instructional message.

$$\text{MC Gugian's Gain Ratio} = \frac{\text{Real Gain}}{\text{Expected Gain}}$$

$$= \frac{\bar{y} - \bar{x}}{A - \bar{x}}$$

\bar{X} : The average of the students' marks in the first semester.

\bar{y} : The average of the students' marks in the second semester.

A : Total mark.

The percentage is between (0-1).

The instructional message is considered effective if the calculated percentage isn't less than (0.6).

The calculated percentage for the male experimental group is (0.66) and for the female experimental group is (0.71).

3.10 Effectiveness (Eitta Square)

This equation was used to measure the effectiveness of the instructional message.

$$\text{Effectiveness} = \frac{t^2}{t^2 + d_f}$$

t^2 = The square of the calculated t

Effectiveness ≤ 0.06 means low effectiveness .
 $0.06 \leq$ Effectiveness ≤ 0.14 means moderate effectiveness .
 $0.14 \leq$ Effectiveness means high effectiveness

Effectiveness for the male experimental group was (0.09) and for the female experimental group was (0.10)

3.8 Summary

This study was conducted in the second semester of the scholastic year 2009/2010, at Abu Dis Girls' secondary school and at The Arab Institute. During the application of the study , the researcher took down the names of the schools , which has eleventh grade students , and the numbers were taken from the Education Office in Al Ram , and purposely selected (46) students from Abu Dis Girls Secondary School and The Arab Institute . Then the researcher divided them purposely into four groups : An experimental girl group consisted of (23) students , an experimental boy group consisted of (25) students, a control girl group consisted of (22) students and a control boy group consisted of (25) students . To determine the homogeneity of the four groups , the researcher made equivalence between them by making a comparison between the students' achievement scores in the first semester of scholastic year 2009/2010 . The results indicated that they were homogeneous before the application of the proposed way of teaching .

The researcher taught the girls in the experimental and in the control groups . And another teacher taught the boys in the experimental and control groups. This experiment took four weeks from 21/2/2009 to 21/3/2010 . In each time the experimental groups used the computers to learn the intended activities . That to say twenty class sessions were carried out in four weeks . The class sessions for every activity were (5) class sessions . As for the control groups , they received the same activities by the traditional way of teaching method , which didn't involve using computers . The control and the experimental girl groups were taught by the researcher and the experimental and the control boy groups were taught by another teacher .

Chapter 4

Results of the study

This study was designed to determine the effect of using multimedia interaction on the development of English language skills of the eleventh grade students . Therefore, it investigated the effects of the proposed way of teaching and the improvement of English language skills of the eleventh grade students .

In this chapter , the researcher shows the results of the study along side examining the three hypotheses of the study . The results are divided in accordance with the hypotheses of the study .

4.1 Results of the first hypothesis

The first hypothesis was:

There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the use of multimedia interaction.

For testing this hypothesis the means and the standard deviations of the students' achievement were computed .

Table (4. 1) : Means and standard deviations of the students' achievement test of the experimental groups due to gender variable .

Gender	Number	Mean	Std . Deviation
male	25	93.04	2.922
female	23	93.09	2.314

Table (4.1) shows the means and the standard deviations of the students' achievement test of the experimental group due to gender variables . It indicates that the means and the standard deviations of male and female in the experimental groups are almost equal.

Table (4.2) : Means and standard deviations of the students' achievement test of the control groups due to gender variable .

Gender	Number	Mean	Std. Deviation
male	25	80.20	3.663
female	23	80.04	6.011

Table (4.2) shows the means and the standard deviations of the students' achievement test of the control groups due to gender variable . It indicates that the means and the standard deviations of male and female in the experimental groups are almost equal .

Table (4 .3) :Results of the t test in the students' achievement test for the differences between the male in the experimental and in the control groups.

Gender	Method of teaching	Mean	Std. Deviation	t	df	Sig.*
male	Control-experimental	12.840	4.836	13.275	24	.001

significance at ($\alpha \leq 0.05$)

Table (4 .3) shows the results of the t test in the students' achievement test for the differences between the male in the experimental and in the control groups due to the method of teaching variable. Results show that there is a significant difference in the students' achievement test between the male in the experimental and in the control groups due to the method of teaching variable in favor of the experimental groups which used multimedia interaction.

Table (4 .4) :Results of the t test in the students' achievement test for the differences between the female in the experimental and in the control groups due to the method of teaching variable.

Gender	Method of teaching	Mean	Std. Deviation	t	df	Sig.*
female	Control-experimental	13.043	5.866	10.664	22	.001

significance at ($\alpha \leq 0.05$)

Table (4 .4) shows the results of the t test in the students' achievement test for the differences between the female in the experimental and in the control groups due to the method of teaching variable. Results show that there is a significant difference in the students' achievement test between the female in the experimental and in the control groups due to the method of teaching variable in favor of the experimental groups which used multimedia interaction.

4. 2 Results of the second hypothesis

The second hypothesis was :

There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the students' gender.

For testing this hypothesis t test was used .

Table (4 .5) :Results of the t test in the students' achievement test for the differences between the experimental groups due to gender .

Gender	Teaching method	Mean	Std. Deviation	t	df	Sig.
Male- female	experimental	.087	4.078	.102	22	.919

Table (4 .5) shows the results of the t test in the students' achievement test for the differences between the experimental groups due to gender . Results show that there is no significant difference in the students' achievement between the experimental groups due to gender .

Table (4 .6) : Results of the means and the standard deviations of the students' achievement test between the control groups due to gender.

Gender	Teaching method	Mean	Std. Deviation	t	df	Sig.
Male-female	control	.348	6.513	.256	22	.800

Table (4 .6) shows the results of the t test in the students' achievement test for the differences between the control groups due to gender .Results show that there is no significant difference in the students' achievement between the control groups due to gender .

4. 3 Results of the third hypothesis

The third hypothesis was:

There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the interaction between the use of multimedia interaction and the students' gender.

For testing this hypothesis two way Analysis of Variance was used.

Table (4.7) : Results of two- way Analysis of variance of the students' achievement test due to the interaction between the method of teaching and gender .

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	4017.414	3	1339.138	85.571	.001
Within groups	1439.743	92	15.649		
total	5457.156	95			

*significance at ($\alpha \leq 0.05$)

Table (4.7) shows the results of two- way Analysis of variance of the students' achievement test due to the interaction between the method of teaching and gender .

Results show that there is significant difference in the students' achievement test due to the interaction between the method of teaching and gender variables .

4.4 Results of Black Gain Ratio

Black Gain Ratio was used to measure the effectiveness of the instructional message. The instructional message is considered effective if the percentage is more than (1.2) .

The calculated percentage for the male experimental group was (0.7) and for the female experimental group was (0.8) . According to this equation, the two percentages were less than (1.2) ,and so the instructional message wasn't considered effective .

4.5 Results of Mc Gugian's Gain Ratio

Mc Gugian's Gain Ratio was used to measure the effectiveness of the instructional message. The instructional message is considered effective if the percentage isn't less than (0.6) . The calculated percentage for the male experimental group was (0.66) and for the female experimental group was (0.71). According to this equation, the two percentages were more than (0.6) , and so the instructional message was considered effective .

4.6 Results of Effectiveness (Eitta Square)

Effectiveness (Eitta Square) was used to measure the effectiveness of the instructional message. Effectiveness for the male experimental group was(0.09) and for the female experimental group was(0.10) . Both percentages were less than (0.14) , and so Effectiveness was considered moderate .

4.7 Summary

The researcher in this chapter has presented the findings and results of the statistical analysis . These results have been displayed in two sections in term of answers to the three hypotheses of the study . Means, standard deviations and Two way Analysis of Variance were used and the following diagram indicates the results of the study.

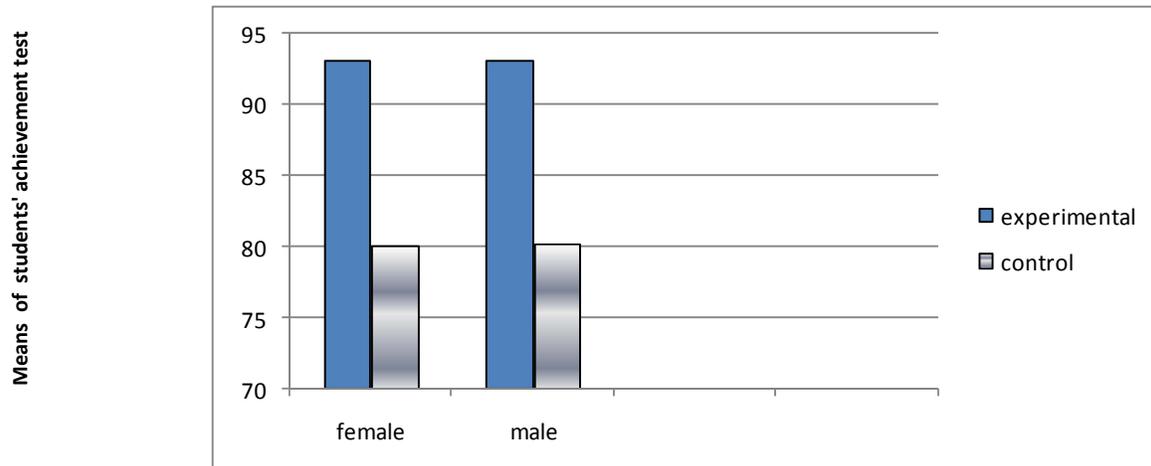


Figure (1)

Means of students' achievement test for the experimental and control groups.

Chapter 5

Discussion, Conclusions and Recommendations

5.1 Introduction

This study is an attempt to find out the effects of multimedia interaction on the development of English language skills for the eleventh graders , so the results displayed in the previous chapter are to be discussed , and in the light of these results conclusions are to be drawn , and recommendations are to be suggested . The researcher presents her discussion of the findings of the study concerned with the effect of the groups (the experimental girl group , the experimental boy group the control girl group and the control boy group) , the use of the new method , gender and the interaction between the new method of teaching and gender . Results are also compared with other related studies to find whether these results are consistent with them or not .

5.2 Discussion of the results of the hypotheses

5.2.1 Results of the first hypothesis

The first hypothesis was

There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the use of multimedia interaction.

For testing this hypothesis the means and the standard deviations of the students' achievement of were computed as shown in table (4.3) and table (4.4).

Table (4 .3) shows the results of the t test in the students' achievement test for the differences between the male in the experimental and in the control groups due to the method of teaching variable . Results show that there is a significant difference at ($\alpha \leq 0.05$) in the students' achievement test between the male in the experimental and in the control groups due to the method of teaching variable in favor of the experimental male groups which used multimedia interaction .The significance was (.001) , and it was much less than (.05) . The means of the male students in the experimental groups exceed the means of the male students in the control groups. The average of the increase was (12. 840) .

Table (4 .4) shows the results of the t test in the students' achievement test for the differences between the female in the experimental and in the control groups due to the method of teaching variable . Results show that there is a significant difference in the students' achievement test between the female in the experimental and in the control groups due to the method of teaching variable in favor of the experimental groups which used multimedia interaction .The means of the female in the experimental group exceeds the means of the female in the control group . The average of the increase is (13.043) .

Table (4 .3) and table (4.4) show the results of the t test in the students' achievement for the differences between the experimental and the control groups according to the use of the new method variable. Results show that there is a significant difference at ($\alpha \leq 0.05$) between the control groups and the experimental groups in the achievement test due to the method

of teaching in favor of the experimental group which used multimedia interaction. Thus , the first hypothesis set forth in this section was rejected .

Results are consistent with Stephen (1998) who examined the differences in students' understanding and performance among middle school students through traditional method as compared to integrated multimedia , and internet technologies . Results indicated that the integration of multimedia , and internet technology into the middle school curriculum could enhance students' learning and support students' understanding and application . Result also agreed with Boling (1996) who conducted a study to determine which method – individual learning , cooperative learning or integrative multimedia , in addition to lecture based distance education was most effective and satisfying . Results indicated that the interactive multimedia subjects enjoyed the study sessions .

Results are consistent with Bailey (1995) who found out that the computer applications enhanced length and quality of composition , increased students' self –esteem , enhanced students' organizing their thoughts via story boarding , and got good overall reaction from the students .

Another study that supports the results of the first hypothesis is the study of AL Hamshari (1993) who studied the effect of educational computer on the achievement of "eight grade " UNRWA pupils in mathematics in Jordan . Results of the study revealed difference of statistical significance in the performance of the experimental group .

Results are consistent with Qunoe' (2002) who found that the use of CD-ROM based software as a technique to teaching third grade students' English language skills proved to have significantly positive effects on the students' achievement .

This study is consistent with Selay Arkun, Buket Akkoyunlu who conducted a study in (2008) and found that multimedia learning environment positively affects achievement.

This study is consistent with Chris Evans and Nicola Gibbons (2006) who conducted a study to determine whether the addition of interactivity to a computer - based learning package enhanced the learning process and found that students using the interactive system outperformed those using the non interactive system in the problem-solving test, and needed less time to complete both memory and problem-solving tests.

Results disagreed with Schardt (1997) whose study showed no significant differences between the experimental and control groups in the increase of English language and reading skills .

5.2.2 Results of the second hypothesis

The second hypothesis was

There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the students' gender.

For testing this hypothesis t test was used as shown in table (4.5) and table (4.6) .

Table (4 . 5) shows the results of the t test in the students' achievement test for the differences between the experimental groups due to gender . Results show that there is no significant difference in the students' achievement between the experimental groups due to gender .

Table (4 . 6) shows the results of the t test in the students' achievement test for the differences between the control groups due to gender .Results show that there is no significant difference in the students' achievement between the control groups due to gender .

This study is consistent with Ahmad (2001) who investigated the computer's effect on the direct achievement and retention of the basic tenth grade students in the unit which is about " the universe and its main component " . Results showed that there were no significant differences between means scores in direct achievement , attributed to gender, but there were significant differences in retention achievement attributed to gender , The results disagreed with Evangelos and Panagiotis (2008) who conducted a study to discover the differences in attitudes of Greek physical education students towards the subject of computers in comparison with their involvement in physical activities . Results indicated gender differences on two factors, “affect” and “perceived usefulness”. No gender differences were indicated on physical activities .

5.2.3 Results of the third hypothesis

The third hypothesis was:

There is no statistically significant difference at ($\alpha \leq 0.05$) in the students' achievement of the 11th grade in the English language skills due to the interaction between the use of multimedia and the students' gender.

For testing this hypothesis two way Analysis of Variance was used as shown in table (4.7) .

Results of table(4.7) show that there is a significant difference in the students' achievement according to the interaction between the method of teaching and gender variables . The significance was less than (.05) . The means of the experimental groups (male and female) were higher than the total means ; whereas , the means of the control groups (male and female) were less than the total means .

Result of analysis provided evidence for rejecting this hypothesis which revealed that there is a significant difference at ($\alpha \leq 0.05$) in students' achievement between the experimental and control groups in favor of the experimental groups .

This study is consistent with Qunoe' (2002) who studied the effect of multimedia CD-ROM based software on English language skills of the third grade students at Private Schools in Nablus Area . Results revealed no significant differences in students' achievement test scores due to the interaction of group with sex .

This study disagreed with Ahmad (2001) who investigated the computer's effect on the direct achievement and retention of the basic tenth grade students in the unit which was about " the universe and its main component " . Results showed that there were no significant differences between the students' means scores in direct achievement and in retention achievement , attributed to inter -action between gender and method .

The researcher assumed that the use of multimedia interaction is of great value for the teaching learning process . It has a positive effect on the students' achievement . The students followed the medium he /she felt most appropriate for his/ her needs . Multimedia interaction gives the students the chance to work at their own ability .

The researcher finds that the use of multimedia interaction could motivate students all the time, because the students find it amusing and attractive to break the monotony of the classroom and prevent boredom. In addition, the material learned by multimedia interaction is remembered and isn't forgotten in a short time.

5.3 Results of Black Gain Ratio

Black Gain Ratio was used to measure the effectiveness of the instructional message. The instructional message is considered effective if the percentage is more than (1.2). The calculated percentage for the male experimental group was (0.7) and for the female experimental group was (0.8). According to this equation, the two percentages were less than (1.2), and so the instructional message wasn't considered effective.

5.4 Results of Mc Gugian's Gain Ratio

Mc Gugian's Gain Ratio was used to measure the effectiveness of the instructional message. The instructional message is considered effective if the percentage isn't less than (0.6). The calculated percentage for the male experimental group was (0.66) and for the female experimental group was (0.71). According to this equation, the two percentages were more than (0.6), and so the instructional message was considered effective.

5.5 Effectiveness (Eitta Square)

Effectiveness (Eitta Square) was used to measure the effectiveness of the instructional message. Effectiveness for the male experimental group was (0.09) and for the female experimental group was (0.10). Both percentages were less than (0.14), and so Effectiveness was considered moderate.

5.6 Conclusions

Results of this study indicated that the use of multimedia interaction as a technique to teach the eleventh grade students' English language skills proved that there are significant positive effects on the students' achievement.

Results showed that the experimental groups outperformed the control groups on the achievement test. Generally, the findings of the study indicated that there were statistically significant differences between experimental groups and the control groups. The independent sample t-test showed significant differences at ($\alpha \leq 0.05$) between the means of the students in the experimental groups and the means of the students in the control groups in favor of the experimental groups. The high means of the experimental groups was likely due to the effect of using multimedia interaction technique. This technique arouses students' interest and provides them with some background knowledge while practicing the activities. It is worth mentioning that the four groups of this study were selected on equal bases and taught under the same conditions. The experimental groups were taught by using multimedia interaction, while the other groups were taught in a traditional way of teaching. As mentioned before, the findings revealed statistically significant differences in favor of the experimental groups. The findings of the study also revealed significant differences in students' achievement due to the interaction of the use of the new way of teaching and students' gender.

5.7 Recommendation

After surveying and discussing the results of the study , the researcher offers the following recommendations:

Researchers are recommended to conduct similar studies , which investigate the effect of multimedia interaction on other graders .

English language teachers are recommended to make use of multimedia interaction in teaching English language skills in order to motivate students who learn English as a foreign language .

The ministry of Education is recommended to familiarize the EFL teacher with the importance of using multimedia interaction in teaching English language by holding seminars , meetings and workshops , and to qualify the EFL teachers to be able to use computers effectively , and to provide every school with a computer laboratory .

The curriculum designers are recommended to effectively implement English language curriculum with multimedia interaction .

The colleges and universities are recommended to make their own decision concerning the integration of technology into the teacher education curriculum .

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Appendixes

Appendix one

Names of schools and numbers of male and female eleventh grade students as registered
in Jerusalem Suburbs of Al Ram .

No.	Name of school	Number of students
1.	Al Umaweya secondary girls' school	121
2.	Al Malek Gazi secondary school	120
3.	Shuhada' Hezma secondary girls' school	74
4.	Beit Souriq secondary boys' school	20
5.	Beit Iksa secondary girls' school	20
6.	Beit Iksa secondary boys' school	8
7.	Anata secondary boys' school	46
8.	Anata secondary girls' school	79
9.	Masqat secondary boys' school	14
10.	Al Ezariya secondary girls' school	117
11.	Abu dis secondary girls' school	113
12.	Abu dis secondary boys' school	44
13.	Al Sawahra Al sharkia secondary boys' school	24
14.	Al Sawahra Al sharkia secondary girls' school	38
15.	Beer Nabala secondary boys' school	21
16.	Qatana secondary boys' school	43
17.	Al Kbaba secondary girls' school	162

18.	Al Jeeb secondary boys' school	27
19.	Beit Dokko secondary boys' school	11
20.	Beit Hanina secondary girls' school	8
21.	Mekhmas secondary girls' school	16
22.	Mekhmas secondary boys' school	7
23.	Jaba' secondary girls' school	22
24.	Jaba' secondary boys' school	17
25.	Alarm secondary boys' school	12
26.	Alarm secondary girls' school	66
27.	Beit Inan secondary boys' school	23
28.	Fatima Alzahra' secondary girls' school	21
29.	Beer Nabala secondary girls' school	26
30.	Hezma secondary boys' school	44
31.	Mugtaribi Beer Nabala Alasasiya	11
32.	Akademiya Badraj	27
33.	Arab Institute for boys	78
Total		1602

Table of specification

<i>Topics Taught</i>	<i>Aims</i>							
	<i>knowledge</i>	<i>comprehension</i>	<i>application</i>	<i>synthesis</i>	<i>Time spent on topic</i>	<i>% of total time spent on topic</i>	<i>Number of questions</i>	<i>Number of points per topic area</i>
Reading	To know the highlighted words.	To understand the main ideas presented in the topic.			4 class sessions	20%	2Questions	20
Vocabularies	To know the meaning and the opposite of some words	To write the correct form of the given word.			4 class sessions	20%	2Questions	20
Listening		To distinguish between implicit and explicit information .		To extract key information for note taking and summarizing purposes .	4 class sessions	20%	2Questions	20

Table of specification

<i>Topics Taught</i>	<i>Aims</i>				<i>Time spent on topic</i>	<i>% of total time spent on topic</i>	<i>Number of questions</i>	<i>Number of points per topic area</i>
	<i>knowledge</i>	<i>comprehension</i>	<i>application</i>	<i>synthesis</i>				
Language		To choose the correct language form.	To make meaningful sentences .		4 class sessions	20%	2QuestionS	20
Writing		To transfer information from the photo into writing .	To Arrange scrambled sentences into a coherent paragraph		4 class sessions	20%	2QuestionS	20
Total	2	5	2	1	20	100%	10 QuestionS	100

Appendix three

Achievement test	
Eleventh grade	
Time :1hour	Name :
Total mark :(100)	Date :

Reading comprehension

(20 marks)

Read the following paragraphs then answer the questions that follow them :-

This is a large area of the Atlantic which is famous because many ships and planes have mysteriously disappeared there . The worst disaster of all was in 1918 when the American ship Cyclops , with a crew of 300 , sank without even a call for help . The most famous was the **1945** disappearance of flight 19 , with fourteen crew members . The five planes left Florida at 14.00 for a simple training flight . Then , at 15.45 , **they** reported that their navigation equipment had stopped working , and they were lost . Later , they thought they were over the Gulf of Mexico and turned east to find Florida . In fact , they must have been over the Atlantic , and they should have flown west . Their radio messages started fading and at the same time , stormy weather was developing . Soon after dark , they must have run out of fuel and crashed far out in the Atlantic . The tragedy was made worse soon **afterwards** when a rescue plane that was searching for them exploded and crashed .

Many people have survived and reported strange experiences in the Bermuda Triangle . Planes suddenly drop **hundreds of meters** for no reason . Ships half sink and then slowly rise again . Large areas of sea turn rough and white with bubbles and rise up to a meter above the water around .

There is now an explanation . It seems that large amounts of methane gas (CH₄) lie beneath the Bermuda Triangle seabed – and many other parts of the world's sea beds . Methane has no color or smell , **it** is light and it explodes easily .

(5marks)

1. What has mysteriously disappeared ?

.....

2. How many people were there on the American ship Cyclops ?

.....

3. Why did the five planes leave Florida ?

.....

4. What was happening when their radio messages started fading ?

.....

5. When did the tragedy of the five planes become worse?
.....

Write who or what the following words and numbers refer to :- (2 marks)

1. The tragedy was worse soon **afterwards**
2. **They** reported that their navigation equipment had stopped working
3. **Hundreds of meters**
4. **1945**

7. Write the meaning of the following words :- (3 marks)

1. Exploded :
2. Disappearance :
3. Fading :

Complete the following sentences as required :- (4 marks)

1. A countable regular plural noun is
2. The word that means ambiguous is
3. The pronoun **it** in the last line refers to
4. A past modal verb is

True or false : (3 marks)

1. There is no explanation for the ships and planes disappearance
2. Methane gas has a bad smell
3. Methane gas lies beneath the Bermuda Triangle only

Write the opposite of the following words :- (3 marks)

1. Complicated :
2. Smooth :
3. Earlier :

Vocabularies :- (20 marks)

Use the following words to fill in the blanks:-(note : there are more words than needed) (4 marks)

Assess , unconscious , in good condition , explosion , triangle , mysteriously.

1. Eating healthy food helps us to live
2. After the accident had happened , the injured man became.....
3. Before start giving the first aid it is essential to the whole situation .
4. To draw a, a ruler and a pen are needed.

2. Use the correct form of the given words to fill in the blanks :-

(10 marks)

1. My friend is aperson , so he does whatever he wants quickly . (decide)
2. People need.....rules to organize their lives . (safe)
3. We need a lot ofto write our report . (inform)
4. Theythat they were lucky to win the prize . (think)
5. Some people are very,so they are always ready to offer their help (help)

Use the correct form of the given phrasal verbs to fill in the blanks (note : there are more phrasal verbs than needed) (6 marks)

Turn into , turn out , turn back , turn off , turn on

1. It is necessary to.....all the electric machines before sleeping .
2. They 'vebefore reaching the top of the mountain .
3. With their hard efforts , they willtheir untidy piece of landa beautiful garden .

Language :-

(20 marks)

Provide an appropriate statement in response to each of the following situations using the given modals in parentheses : (10 marks)

1. Ahmad takes Ali's bicycle without asking his permission (shouldn't).
.....
2. Ahlam goes to the cinema instead of going to school . (should)

.....
3. Huda is wearing a black dress (may)
.....

4. Ali wants to make a party, and so he invites me . (must)
.....

Fill in each blank with a suitable modal verb from the verbs in parentheses (couldn't have , shouldn't have , must have , ought to have , should (10 marks)

1. I can't find my keys . I them at home (leave)

2. The patient didn't feel better . Hethe medicine (take)

3. If the door hadn't been open , the thiefthe house . (enter)

4. The driverat the traffic light to avoid the accident .(stop)

5. Hassan works12 hours a day . I wonder why hethat . (do)

Listening and Speaking : (20marks)

Listen to tick and repeat the heard expression :- (15marks)

To express possibility , we say.....

1) The woman with the boxes could have fallen over it .

2) The woman with the boxes would have fallen over it .

To add some thing , we say.....

1) And there is something else .

2) And there is another thing .

When we start talking , we say.....

1) To start with , that woman is carrying far too much.

2) For a start , that woman is carrying far too much.

To offer our help ,we say.....

1) would you like me to carry this box for you.

2) can I carry it for you .

To give late advice , we say.....

1) you should come on time.

2) you should have come on time .

Listen and under line the words or sound with the main stress : (5marks)

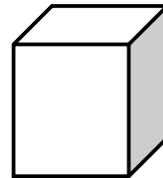
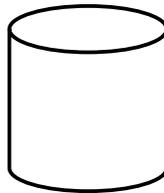
1. I' d hate to work there.

2. And there is some thing else.

3. There are lots of dangers.

Writing:- (20 marks)

Write the nouns and the adjectives for the following s two and three dimensional shapes : (12 marks)



.....

.....

.....

.....

.....

.....

Complete the following ideas and then order them according to the given passage . (8 marks)

- Ships and then rise again .
- Planes
- Methane..... from the
- The sea turns..... and Thisthe air above an
- Ships
- Planes
- Methane through whichless.....
- Methane rises – through the which Less

Good luck

Appendix four

Unit eight analysis

This dangerous world

Aims	Content	Activities	Evaluation
<p>Reading comprehension: (introduction)</p> <ul style="list-style-type: none"> ▶ To introduce a topic and to arouse interest. ▶ To find out what students already know about the topic. ▶ To make prediction about reading text . ▶ To read with correct pronunciation and intonation . ▶ To summarize reading text . ▶ To relate the text to personal experience , opinion, emotions and evaluation . ▶ To talk about inferred attitude based on the given ideas . 	<ul style="list-style-type: none"> ▶ Some photos are presented to show students what to do to protect themselves and the others. ▶ Four tips are to be followed in an emergency. 	<ul style="list-style-type: none"> ▶ Looking at the photos and saying how to be safe . ▶ Some new concepts and ideas are presented . ▶ Saying what they think . 	<ul style="list-style-type: none"> ▶ Pre-evaluation. ▶ Summative evaluation . ▶ Students' correct responses .

<p>Vocabularies:</p> <ul style="list-style-type: none"> ▶ To collect vocabularies. ▶ To review and practice vocabularies. ▶ To sort vocabularies according to their functions . ▶ To learn words in pairs which helps in memorizing both of them as one word . ▶ To use word pairs correctly. ▶ To join the new concepts with the main text ▶ To apply the new concepts in new situation ▶ To give helpful hints and ideas about study skill questions based on an aural text . <p>Listening:</p> <ul style="list-style-type: none"> ▶ To distinguish between implicit and explicit information , relevant and irrelevant ideas and fact from opinion in an aural text . ▶ To extract key information for note taking and summarizing purposes . ▶ To identify core vocabularies. ▶ To engage in conversation effectively using suitable conversation management skills and appropriate communication . <p>Language :</p> <ul style="list-style-type: none"> ▶ To practise choosing an using the correct language form ▶ To make meaningful sentences . ▶ To give some practice in using the language accurately and fluently and to convey meaning . 	<ul style="list-style-type: none"> • Some Vocabularies taken from previous lessons reading text . • Words are given bellow a photo to be added to the photo. • Some phrasal verbs and word families are explained. ▶ Listening to choose and repeat the correct expression. <p>Some questions to be answers.</p>	<ul style="list-style-type: none"> • Completing the table with correct words taken from the text. • Using the correct form of the given words to fill in the blanks. ▶ Filling in the blanks with correct phrasal verbs. • Listening to the cassette to answer the asked questions . • Listening a second time to arrange the given dangers as they are heard from the cassette. <p>Writing correct sentences using modal verbs.</p>	<ul style="list-style-type: none"> ▶ Teachers assessing the students answers. • Teachers assessing the students answers.
--	--	---	--

<p>Reading comprehension (main topic)</p> <ul style="list-style-type: none"> ▶ To skim to obtain gist and general impression of text and figures . ▶ To scan for specific information from the text and the two figures . ▶ To read familiar material with correct pronunciation and intonation . ▶ To analyze components of the text including the text and the theme . ▶ To extract and synthesize information from the text , the figure and colored pictures . ▶ To identify the main ideas in the text . ▶ To make prediction about how the ship of Mary Celeste disappeared. ▶ To identify the supporting details. ▶ To distinguish main ideas from supporting ideas . ▶ To identify visual materials . ▶ To deduce meanings of unfamiliar concepts . ▶ To distinguish fact from opinion . ▶ To interpret information presented in diagrammatic display . ▶ To infer mood and author's a attitude. 	<p>A photo on which different questions are asked .</p> <p>Students working with their partners to find four more dangers in the photo.</p> <p>Students working with their partners to think of some dangers in their areas and to find solutions to these problems.</p>	<ul style="list-style-type: none"> • Working with a partner to form conversation ▶ correcting the verbs given between brackets ▶ Working with a partner to ask and answer some questions using modal verbs. ▶ Students' working with their partners to write news papers reports. ▶ Students working with their partners . <p>Problem solving</p>	<ul style="list-style-type: none"> • Teachers assessing the students answers. • Teachers assessing the way students ask and answer questions . <p>Pre- discussing .</p> <p>While discussing.</p> <p>After discussing .</p> <p>Teachers assessing the students' answers.</p> <p>Teachers assessing the way students ask and answer questions .</p> <p>Teachers assessing the students' answers.</p>
--	--	--	--

<p>Writing:</p> <ul style="list-style-type: none"> ▶ To use capital letters and punctuation (period ,comma question mark, quotation marks, colon, apostrophe , parentheses, and exclamation marks) correctly. ▶ To arrange scrambled sentences into a coherent paragraph ▶ To write a text dictated at a reasonable speed using correct punctuation. ▶ To outline a text . ▶ To make notes about a text . ▶ To summarize a text by expanding notes . ▶ To extract and synthesize information from different sources and present it in a coherent text using appropriate text organization and discourse markers ▶ To transfer information from the photo into writing . ▶ To revise ,edit , and rewrite student's own written work . 	<p>Labeling a diagram.</p> <p>Taking notes from the text .</p>	<ul style="list-style-type: none"> ▶ Reading the text's key points ▶ Filling in the given blanks with some opposites . ▶ writing the name and the adjective form of some shapes ▶ Writing the final paragraphs. 	<p>The students are evaluated during the whole process of writing and a complete idea can be got after marking their copy books ,according to their clear under – standing , correct grammar , spelling , vocabulary , punctuation and according to linking sentences and arranging paragraphs .</p>
--	--	---	--

Appendix five

Criterion reference test

Eleventh grade

Time :1hour

Name :

Total mark :(30)

Date :

Question number one:

(10 marks)

Reading comprehension :

Read the following paragraphs then answer the questions that follow them:

In November 1872 , Captain Briggs , his wife and daughter , and a crew of seven left New York on board his small cargo ship ,the Mary Celeste.

On December 5, the Dei Gratia discovered the Mary Celeste a little to the east of the Azores .The ship was in good condition , butthere was nobody on board .The cargo was complete . Just the ship's life boat and navigation equipment were gone . All ten people must have left together . But why , the world is wondered .

1. How many people were there on the Mary Celeste ?

.....

2. What was the Mary Celeste ?

.....

3. Where was it discovered ?

.....

Complete the followings as required :

1) The world wondered means.....

2) A past modal verb is

True or false

Parts of the cargo was lost

Question number two :

(4 marks)

Vocabularies :

Use the following list to fill in the blanks :

Complicated , active , turn off , useful , bruised

1. Before leaving your house ,the electric machines to avoid dangers.
2. I have a..... lesson ,so I need someone to help me.
3. While my brother was playing football , he his leg.
4. To be, every one should eat his/her breakfast .

Question number three:

(6marks)

Language :

Use the following modals to fill in the blanks .

Could , will , may , should have , would

1. I am sure that shevisit us .
2. He made an accident because he drove quickly , so he been more careful while driving .
3.you like to drink some coffee .
4. Ihear the baby crying .

Question number four :

(10 marks)

Writing :

Write two paragraphs about a dangerous experience happened to you .

You can benefit from the following ideas :

(being shocked , having no one to provide help , being near death , having a lucky escape from death)

Good luck

Appendix six

Strategies to be applied in teaching process

Lesson 1&2 (Reading (two class sessions))

1.Focus (aims)

- ▶ **To introduce the topic and to arouse interest.**
- ▶ **To find out what students already know about the topic.**
- ▶ **To make prediction about reading text .**

Content

Some photos to comment on them.

Procedure

Students read the questions , hear the sound and see the photos , the text and their animation.

Evaluation

students are evaluated according to their correct answers and according to their involvement in the learning process.

2. Before you read (aim)

To develop students' awareness of the presented ideas.

Content

Simple questions to be answered depending on the students' experiences.

Procedure

Students use the given photo to answer the given questions.

Evaluation

students are evaluated according to their correct answers and according to their involvement in the learning process.

3. While you read (aims)

- ▶ **To develop and practice reading skills .**
- ▶ **To skim to obtain gist and general impression of the given text .**
- ▶ **To learn new vocabularies .**
- ▶ **To scan for specific information from the text to answer the given questions.**

Content

Simple questions to be answered depending on the students' experiences.

Procedure

Students use the given photos and text to answer the given questions.

Evaluation

students are evaluated according to their correct answers and according to their involvement in the learning process.

After you read (aims)

- ▶ To identify the main ideas in the text .
- ▶ To extract and synthesize information from different sources.
- ▶ To join ideas in the text with the ideas presented by the photos (visual aid).
- ▶ To analyze the components of the text including main expressions .
- ▶ To infer the authors attitude toward the good results of being able to help in emergency .
- ▶ To deduce the meaning of the unfamiliar words from the text .
- ▶ To read with correct pronunciation and intonation .
- ▶ To summarize reading text .

Content

Highlighted words ,four beneficial ideas in the emergency and photos of accidents to be explained .

Procedure

Students use the photos and the given ideas to answer the given questions.

Evaluation

students are evaluated according to their correct responses to the given questions.

Lesson 3

Vocabulary development: (two class sessions)

Word field : injuries(aims)

- ▶ To collect vocabularies .
- ▶ To review and practices vocabularies .
- ▶ To sort vocabularies according to their functions .
- ▶ To learn new vocabularies and how to use them .

Content

Vocabularies taken from previous lesson's reading text .

Procedure

Students use the photo and the given words to label it . A table and some blanks to be filled .

Evaluation

students are evaluated according to their correct responses.

Lesson 4

Listening and speaking

Listening(aims) (two class session)To extract information to answer some questions .

- ▶ To identify the main idea .
- ▶ To distinguish main ideas from supporting details
- ▶ To identify the topic , setting of aural text .
- ▶ To respond to referential questions based on an aural text .
- ▶ To distinguish between implicit and explicit information and relevant and irrelevant ideas in an aural text .
- ▶ To extract key information for note taking and summarizing purposes.
- ▶ To identify core vocabularies .

- ▶ To hear and repeat correct pronunciation and intonation.

Content

Some ideas about dangerous things and advices on how to be away from dangers .

Procedure

Students use the picture and listened to the sound to label it .

Evaluation

students are evaluated according to their correct responses.

Speaking(aims) (two class sessions)

- ▶ To relate the text to personal experiences , opinions, emotions and evaluation.
- ▶ To talk about inferred attitude based on the given ideas .

Content

Some ideas to be listened to and repeated.

Procedure

Students listen to the sound to repeat the heard expressions .

Evaluation

students are evaluated according to their correct responses.

Lesson 5

Language(aims) (four class sessions)

- ▶ To present grammar for revision .
- ▶ To practise choosing the correct language form .
- ▶ To practise using language forms correctly .
- ▶ To make meaningful sentences .
- ▶ To give some practice on using the language accurately and fluently and to convey meaning .

Content

Some explanations on how to use modal verbs . A colored photo about Ricky and Nadia to help in answering the given questions .

Procedure

Students read the given explanations to answer the given questions.

Evaluation

students are evaluated according to their correct answers.

Lessons 7 & 8

Reading (two class sessions)

Sea mysteries

- ▶ To make inferences about reading text .
- ▶ To develop awareness of semantic fields (word figuring)
- ▶ To skim to obtain gist and general impression of text and figures .
- ▶ To scan for specific information from the text and the two figures .
- ▶ To read familiar material with correct pronunciation and intonation .
- ▶ To analyze components of the text including the text and the theme .
- ▶ To extract and synthesize information from the text and colored pictures .
- ▶ To explain what number refer to .
- ▶ To identify the main ideas in the text .
- ▶ To make prediction about what happen in Bermuda Triangle .
- ▶ To identify the supporting details.
- ▶ To distinguish main ideas from supporting ideas .
- ▶ To identify visual materials .
- ▶ To deduce meanings of unfamiliar concepts .
- ▶ To distinguish fact from opinion .
- ▶ To interpret information presented in diagrammatic display .
- ▶ To relate the text to personal experience , opinion and evaluation.
- ▶ To infer mood and author's a attitude.

Content

Some ideas about Bermuda Triangle . Two colored pictures about The Mary Celeste and Bermuda Triangle to help in conveying the given ideas and in answering the given questions .In addition to some highlighted words.

Procedure

Students read the given explanations and look at the given pictures to comprehend the main ideas and to answer the given questions.

Evaluation

students are evaluated according to their correct answers.

Lessons 9 & 10

Writing and vocabulary

Writing (aims) (four class sessions)

- ▶ To Use capital letters and punctuation (period ,comma ,question mark, quotation marks, colon, apostrophe , parentheses, and exclamation marks) correctly.
- ▶ To Arrange scrambled sentences into a coherent paragraph.
- ▶ To Write a text dictated at a reasonable speed using correct punctuation.
- ▶ To Produce a paragraph.
- ▶ To Outline a text .
- ▶ To Make notes about a text .
- ▶ To Summarize a text by expanding notes .
- ▶ To Extract and synthesize information from different sources and present it in a coherent text using appropriate text organization and discourse markers
- ▶ To Transfer information from the pictures into writing .

Content

A picture and some scrambled notes to be continued and rearranged.

Procedure

Students write their own written work .

Evaluation

students are evaluated according to their correct writing.

vocabulary (aims) (two class sessions)

- ▶ **To write the opposite form of some words.**
- ▶ **To fill in the blanks with some words correctly .**
- ▶ **To label some shapes with their nouns and adjectives.**

Content

Picture , some adjectives ,some nouns and opposites .

Procedure

Students see the pictures and their animation and label them with their nouns and adjectives.

Evaluation

students are evaluated according to their correct writing and answers .

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