Escuela de Ciencias Sociales y Humanidades
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TECNOLOGÍA EN LA ENSEÑANZA DEL INGLÉS

5180

STUDY GUIDE

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INTRODUCTION

There is no doubt that technology is ubiquitous and very important at personal and professional levels. Most people have access to or own a computer and other technological devices, as for example, mobile phones, MP3 players and/or access to Internet. New devices are constantly being made and of course new ways of solving the same old problems come to light.

When it comes to learning English as a foreign language, it is known that for more than two decades, computers have been such a wonderful aid in making the experience more authentic. The twenty-first century is not different, except for the incredible array of improvements and new artefacts that are now available, and that day by day our students come into contact with.

English teachers have to be aware of all those changes and be prepared to face the technological challenges of this millennium, hence the importance of the course Teaching English with Technology.

This course is set to be the very basic foundation of using technology in the English classroom, but above all to be an inspiration for teachers to investigate more and consider the great possibilities of technology in the field.

The textbook used in the course Teaching English with Technology (5180) is *How to Teach English with Technology* by Gavin Dudeney and Nicky Hockly and was published in 2007 by Pearson. Considering the importance of each chapter, the whole book will be covered following the topic sequence established by the authors.

The book will be supported by this study guide which main goal is to provide the students of the course Teaching English with Technology (5180) with a wide range of practical activities and exercises to make the learning experience more productive and rewarding.

Each activity has been designed to help the students achieve the objectives proposed. That is why it is important to complete each and every one of them. Therefore make sure that you also follow the study sequence given.

To obtain the best results, spend quality time reading the textbook and doing the exercises carefully. Follow the instructions given in the chapter to experiment with software and others. Besides, try to “boost” your knowledge by doing online research on the topics you are studying and keeping up to date with the new advancements. Use a highlighter to stress important information you want to go back to and double check in the textbook. And of course NEVER GIVE UP!

I. GENERAL DESCRIPTION OF THE COURSE

This three-credit course combines theoretical and practical learning activities for the students to develop a useful and working understanding of the diverse audiovisual devices and media and their uses in teaching English as a foreign language. Both, distance learning and classroom tutorials, are merged to make the learning experience effective and for the objectives to be achieved. The students work independently doing assigned readings and exercises and then come to class where their work is then discussed and reinforced with more written and oral practices and practical learning activities. That is why the attendance to all the tutorials is mandatory. The classroom, then, becomes a language environment where the students feel confident and at ease to report their findings, work with their partners, do projects, and a whole diversity of activities (like doing conceptual maps, materials and so on) that will help them put their knowledge into practice.

Pre-requisite: Advanced English Grammar (5188)

Co-requisite: Intercultural Communication for English Teachers (5181)

GENERAL OBJECTIVE

Provide the students, for a better professional performance, with the knowledge about the different technological media and their uses as didactic resources in teaching English to primary school students.

II. FIRST WORKSHOP: MULTIMEDIA

General objective

To analyze the bases of technology, its basic operation, and its impact and uses in daily life and in learning environments.

Specific objectives

- Understand why multimedia has become a very important tool in learning.
- b. Know the most common multimedia devices and their uses in education.
- Learn the basic operation of multimedia devices.

Activities

1. Introductory activity: How much do you know about the history of computers? Read the Time Line of Computers found below. It was adapted from

   <http://www.computerhistory.org/exhibits/>.

   Explore the information boxes paying careful attention to how they have evolved to be the amazing tools that they are at present. Based on the reading, draw on a separate piece of paper a time line of your own about computers. Make sure you include the information you find more relevant, but do not forget that every single step in it has been crucial for the computers to be what they are today.

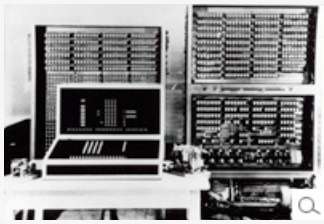
Time Line of Computers

Adapted from http://www.computerhistory.org/

1939

- Hewlett-Packard is Founded. David Packard and Bill Hewlett found Hewlett-Packard in a Palo Alto, California garage. Their first product was the HP 200A Audio Oscillator, which rapidly becomes a popular piece of test equipment for engineers. Walt Disney Pictures ordered eight of the 200B model to use as sound effects generators for the 1940 movie "Fantasia."

1941



- Konrad Zuse finishes the Z3 computer. The Z3 was an early computer built by German engineer Konrad Zuse working in complete isolation from developments elsewhere. Using 2,300 relays, the Z3 used floating point binary arithmetic and had a 22-bit word length. The original Z3 was destroyed in a bombing raid of Berlin in late 1943. However, Zuse later supervised a reconstruction of the Z3 in the 1960s which is currently on display at the Deutsches Museum in Berlin.

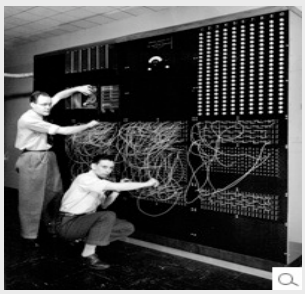
The Zuse Z3 Computer

1942

- The Atanasoff-Berry Computer is completed. Built at Iowa State College (now University), the Atanasoff-Berry Computer (ABC) was designed and built by Professor John Vincent Atanasoff and graduate student Cliff Berry between 1939 and 1942. While the ABC was never fully-functional, it won a patent dispute relating to the invention of the computer when Atanasoff proved that ENIAC co-designer John Mauchly had come to see the ABC shortly after it was completed.

The Atanasoff-Berry Computer

1944



- Harvard Mark-1 is completed. Conceived by Harvard professor Howard Aiken, and designed and built by IBM, the Harvard Mark-1 was a room-sized, relay-based calculator. The machine had a fifty-foot long camshaft that synchronized the machine's thousands of component parts. The Mark-1 was used to produce mathematical tables but was soon superseded by stored program computers.

Harvard Mark-I in use, 1944

SEAC

- The National Bureau of Standards constructed the SEAC (Standards Eastern Automatic Computer) in Washington as a laboratory for testing components and systems for setting computer standards. The SEAC was the first computer to use all-diode logic, a technology more reliable than vacuum tubes, and the first stored-program computer completed in the United States. Magnetic tape in the external storage units (shown on the right of this photo) stored programming information, coded subroutines, numerical data, and output.

LEO

- England´s first commercial computer, the Lyons Electronic Office, solved clerical problems. The president of Lyons Tea Co. had the computer, modeled after the EDSAC, built to solve the problem of daily scheduling production and delivery of cakes to the Lyons tea shops. After the success of the first LEO, Lyons went into business manufacturing computers to meet the growing need for data processing systems.

1953

IBM 701

- IBM shipped its first electronic computer, the 701. During three years of production, IBM sold 19 machines to research laboratories, aircraft companies, and the federal government.

1954

IBM 650

- The IBM 650 magnetic drum calculator established itself as the first mass-produced computer, with the company selling 450 in one year. Spinning at 12,500 rpm, the 650´s magnetic data-storage drum allowed much faster access to stored material than drum memory machines.

1956

MIT TX0

- MIT researchers built the TX-0, the first general-purpose, programmable computer built with transistors. For easy replacement, designers placed each transistor circuit inside a "bottle," similar to a vacuum tube. Constructed at MIT´s Lincoln Laboratory, the TX-0 moved to the MIT Research Laboratory of Electronics, where it hosted some early imaginative tests of programming, including a Western movie shown on TV, 3-D tic-tac-toe, and a maze in which mouse found martinis and became increasingly inebriated.

1959

IBM STRETCH

- IBM´s 7000 series mainframes were the company´s first transistorized computers. At the top of the line of computers — all of which emerged significantly faster and more dependable than vacuum tube machines — sat the 7030, also known as the "Stretch." Nine of the computers, which featured a 64-bit word and other innovations, were sold to national laboratories and other scientific users. L. R. Johnson first used the term "architecture" in describing the Stretch.

1961

IBM 1401

- According to Datamation magazine, IBM had an 81.2-percent share of the computer market in 1961, the year in which it introduced the 1400 Series. The 1401 mainframe, the first in the series, replaced the vacuum tube with smaller, more reliable transistors and used a magnetic core memory.

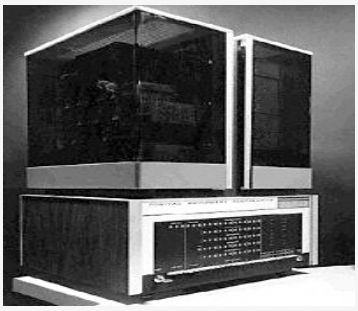
  Demand called for more than 12,000 of the 1401 computers, and the machine´s success made a strong case for using general-purpose computers rather than specialized systems.

1964

IBM System/360

- IBM announced the System/360, a family of six mutually compatible computers and 40 peripherals that could work together. The initial investment of $5 billion was quickly returned as orders for the system climbed to 1,000 per month within two years. At the time IBM released the System/360, the company was making a transition from discrete transistors to integrated circuits, and its major source of revenue moved from punched-card equipment to electronic computer systems.

1965



DEC PDP-8

- Digital Equipment Corp. introduced the PDP-8, the first commercially successful minicomputer. The PDP-8 sold for $18,000, one-fifth the price of a small IBM 360 mainframe. The speed, small size, and reasonable cost enabled the PDP-8 to go into thousands of manufacturing plants, small businesses, and scientific laboratories.

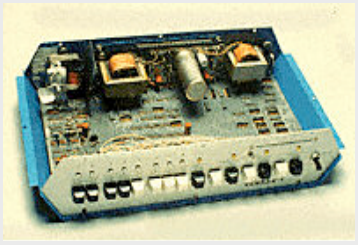
1966

ILLIAC IV

- The Department of Defense Advanced Research Projects Agency contracted with the University of Illinois to build a large parallel processing computer, the ILLIAC IV, which did not operate until 1972 at NASA´s Ames Research Center. The first large-scale array computer, the ILLIAC IV achieved a computation speed of 200 million instructions per second, about 300 million operations per second, and 1 billion bits per second of I/O transfer via a unique combination of parallel architecture and the overlapping or "pipe-lining" structure of its 64 processing elements.

  This photograph shows one of the ILLIAC´s 13 Burroughs disks, the debugging computer, the central unit, and the processing unit cabinet with a processing element.

1971



Kenbak-1

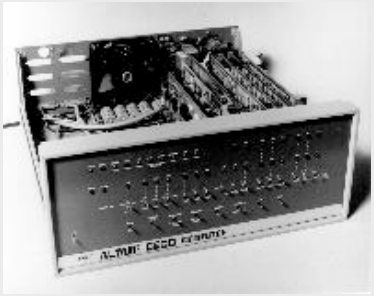
- The Kenbak-1, the first personal computer, advertised for $750 in Scientific American. Designed by John V. Blankenbaker using standard medium-scale and small-scale integrated circuits, the Kenbak-1 relied on switches for input and lights for output from its 256-byte memory. In 1973, after selling only 40 machines, Kenbak Corp. closed its doors.

1974

Xerox Alto

- Researchers at the Xerox Palo Alto Research Center designed the Alto — the first work station with a built-in mouse for input. The Alto stored several files simultaneously in windows, offered menus and icons, and could link to a local area network. Although Xerox never sold the Alto commercially, it gave a number of them to universities. Engineers later incorporated its features into work stations and personal computers.

1975



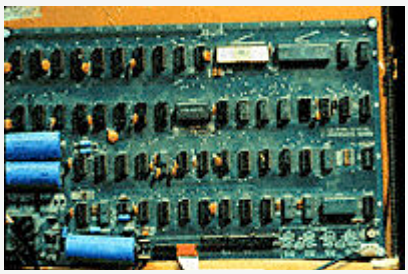
MITS Altair

- The January edition of Popular Electronics featured the Altair 8800 computer kit, based on Intel´s 8080 microprocessor, on its cover. Within weeks of the computer´s debut, customers inundated the manufacturing company, MITS, with orders. Bill Gates and Paul Allen licensed BASIC as the software language for the Altair. Ed Roberts invented the 8800 — which sold for $297, or $395 with a case — and coined the term "personal computer." The machine came with 256 bytes of memory (expandable to 64K) and an open 100-line bus structure that evolved into the S-100 standard. In 1977, MITS sold out to Pertec, which continued producing Altairs through 1978.

Felsenstein´s VDM

- The visual display module (VDM) prototype, designed in 1975 by Lee Felsenstein, marked the first implementation of a memory-mapped alphanumeric video display for personal computers. Introduced at the Altair Convention in Albuquerque in March 1976, the visual display module allowed use of personal computers for interactive games.

1976



Apple I

- Steve Wozniak designed the Apple I, a single-board computer. With specifications in hand and an order for 100 machines at $500 each from the Byte Shop, he and Steve Jobs got their start in business. In this photograph of the Apple I board, the upper two rows are a video terminal and the lower two rows are the computer. The 6502 microprocessor in the white package sits on the lower right. About 200 of the machines sold before the company announced the Apple II as a complete computer.

1977

Commodore PET

- The Commodore PET (Personal Electronic Transactor) — the first of several personal computers released in 1977 — came fully assembled and was straightforward to operate, with either 4 or 8 kilobytes of memory, two built-in cassette drives, and a membrane "chiclet" keyboard.

Apple II

- The Apple II became an instant success when released in 1977 with its printed circuit motherboard, switching power supply, keyboard, case assembly, manual, game paddles, A/C powercord, and cassette tape with the computer game "Breakout." When hooked up to a color television set, the Apple II produced brilliant color graphics.

TRS-80

- In the first month after its release, Tandy Radio Shack´s first desktop computer — the TRS-80 — sold 10,000 units, well more than the company´s projected sales of 3,000 units for one year. Priced at $599.95, the machine included a Z80 based microprocessor, a video display, 4 kilobytes of memory, BASIC, cassette storage, and easy-to-understand manuals that assumed no prior knowledge on the part of the consumer.

1981

- IBM introduced its PC, igniting a fast growth of the personal computer market. The first PC ran on a 4.77 MHz Intel 8088 microprocessor and used Microsoft´s MS-DOS operating system.

Osborne I

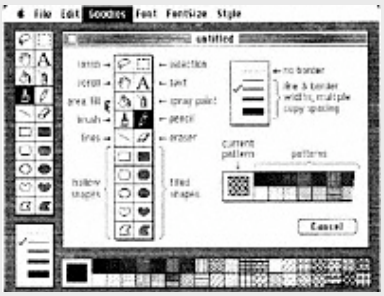
- Adam Osborne completed the first portable computer, the Osborne I, which weighed 24 pounds and cost $1,795. The price made the machine especially attractive, as it included software worth about $1,500. The machine featured a 5-inch display, 64 kilobytes of memory, a modem, and two 5 1/4-inch floppy disk drives.

  In April 1981, Byte Magazine Editor in Chief Chris Morgan mentioned the Osborne I in an article on "Future Trends in Personal Computing." He wrote: *"I recently had an opportunity to see the Osborne I in action. I was impressed with it´s compactness: it will fit under an airplane seat. (Adam Osborne is currently seeking approval from the FAA to operate the unit on board a plane.) One quibble: the screen may be too small for some people´s taste."*

1982

- The Cray XMP, first produced in this year, almost doubled the operating speed of competing machines with a parallel processing system that ran at 420 million floating-point operations per second, or megaflops. Arranging two Crays to work together on different parts of the same problem achieved the faster speed. Defense and scientific research institutes also heavily used Crays.

1984



Apple Macintosh

- Apple Computer launched the Macintosh, the first successful mouse-driven computer with a graphic user interface, with a single $1.5 million commercial during the 1984 Super Bowl. Based on the Motorola 68000 microprocessor, the Macintosh included many of the Lisa´s features at a much more affordable price: $2,500.

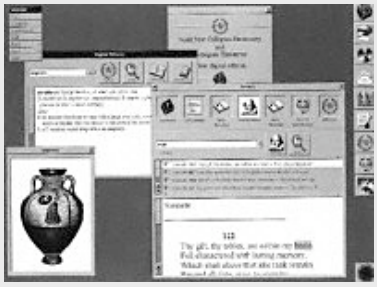
  Apple´s commercial played on the theme of George Orwell´s "1984" and featured the destruction of Big Brother with the power of personal computing found in a Macintosh. Applications that came as part of the package included MacPaint, which made use of the mouse, and MacWrite, which demonstrated WYSIWYG (**W**hat **Y**ou **S**ee **I**s **W**hat **Y**ou **G**et) word processing.

1987

IBM PS/2

- IBM introduced its PS/2 machines, which made the 3 1/2-inch floppy disk drive and video graphics array standard for IBM computers. The first IBMs to include Intel´s 80386 chip, the company had shipped more than 1 million units by the end of the year. IBM released a new operating system, OS/2, at the same time, allowing the use of a mouse with IBMs for the first time.

1988

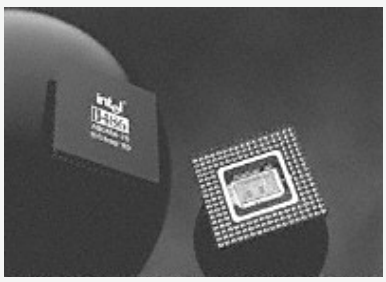


NeXT

- Apple cofounder Steve Jobs, who left Apple to form his own company, unveiled the NeXT. The computer he created failed but was recognized as an important innovation. At a base price of $6,500, the NeXT ran too slowly to be popular.

  The significance of the NeXT rested in its place as the first personal computer to incorporate a drive for an optical storage disk, a built-in digital signal processor that allowed voice recognition, and object-oriented languages to simplify programming. The NeXT offered Motorola 68030 microprocessors, 8 megabytes of RAM, and a 256-megabyte read/write optical disk storage.

1989. Components



Intel 80486

- Intel released the 80486 microprocessor and the i860 RISC/coprocessor chip, each of which contained more than 1 million transistors. The RISC microprocessor had a 32-bit integer arithmetic and logic unit (the part of the CPU that performs operations such as addition and subtraction), a 64-bit floating-point unit, and a clock rate of 33 MHz.

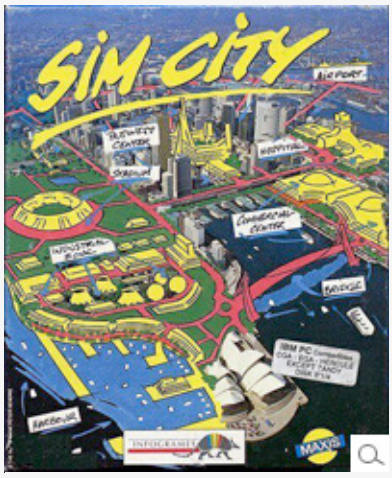
  The 486 chips remained similar in structure to their predecessors, the 386 chips. What set the 486 apart was its optimized instruction set, with an on-chip unified instruction and data cache and an optional on-chip floating-point unit. Combined with an enhanced bus interface unit, the microprocessor doubled the performance of the 386 without increasing the clock rate.

Graphics & Games

- The concept of virtual reality made a statement as the hot topic at Siggraph´s 1989 convention in Boston. The Silicon Graphics booth featured the new technology, designed by the computer-aided design software company Autodesk and the computer company VPL. The term describes a computer-generated 3-D environment that allows a user to interact with the realities created there. The computer must calculate and display sensory information quickly enough to fool the senses.

  Howard Rheingold described, *"shared and objectively present like the physical world, composable like a work of art, and as unlimited and harmless as a dream."* First practical for accomplishing such tasks as flight simulation, virtual reality soon spread much further, promising new ground in video games, education, and travel. Computer users are placed into the virtual environment in a variety of ways, from a large monitor to a head-mounted display or a glove.

Software & Languages



Box Art for SimCity

- Maxis released SimCity, a video game that helped launch a series of simulators. Maxis cofounder Will Wright built on his childhood interest in plastic models of ships and airplanes, eventually starting up a company with Jeff Braun and designing a computer program that allowed the user to create his own city. A number of other Sims followed in the series, including SimEarth, SimAnt, and SimLife.

  In SimCity, a player starts with an untouched earth. As the mayor of a city or city planner, he creates a landscape and then constructs buildings, roads, and waterways. As the city grows, the mayor must provide basic services like health care and education, as well as making decisions about where to direct money and how to build a revenue base. Challenges come in the form of natural disasters, airplane crashes, and monster attacks.

1990. Graphics & Games

VideoToaster Installed at Local Television

Station

- Video Toaster is introduced by NewTek. The Video Toaster was a video editing and production system for the Amiga line of computers and included custom hardware and special software. Much more affordable than any other computer-based video editing system, the Video Toaster was not only for home use. It was popular with public access stations and was even good enough to be used for broadcast television shows like Home Improvement.

Networking

Information Management: A Proposal

Berners-Lee proposal

- The World Wide Web was born when Tim Berners-Lee, a researcher at CERN, the high-energy physics laboratory in Geneva, developed **H**yper**T**ext **M**arkup **L**anguage. HTML, as it is commonly known, allowed the Internet to expand into the World Wide Web, using specifications he developed such as URL (**U**niform **R**esource **L**ocator) and HTTP (**H**yper**T**ext **T**ransfer **P**rotocol). A browser, such as Netscape or Microsoft Internet Explorer, follows links and sends a query to a server, allowing a user to view a site.

  Berners-Lee based the World Wide Web on Enquire, a hypertext system he had developed for himself, with the aim of allowing people to work together by combining their knowledge in a global web of hypertext documents. With this idea in mind, Berners-Lee designed the first World Wide Web server and browser — available to the general public in 1991. Berners-Lee founded the W3 Consortium, which coordinates World Wide Web development.

Software & Languages

- Microsoft shipped Windows 3.0 on May 22. Compatible with DOS programs, the first successful version of Windows finally offered good enough performance to satisfy PC users. For the new version, Microsoft revamped the interface and created a design that allowed PCs to support large graphical applications for the first time. It also allowed multiple programs to run simultaneously on its Intel 80386 microprocessor.

  Microsoft released Windows amid a $10 million publicity blitz. In addition to making sure consumers knew about the product, Microsoft lined up a number of other applications ahead of time that ran under Windows 3.0, including versions of Microsoft Word and Microsoft Excel. As a result, PCs moved toward the user-friendly concepts of the Macintosh, making IBM and IBM-compatible computers more popular.

1991. Software & Languages

Linus Torvalds, 1991

- The Linux operating system is introduced. Designed by Finnish university student Linus Torvalds, Linux was released to several Usenet newsgroups on September 17th, 1991. Almost immediately, enthusiasts began developing and improving Linux, such as adding support for peripherals and improving its stability. Linux is now one of several open source Unix-like operating systems.

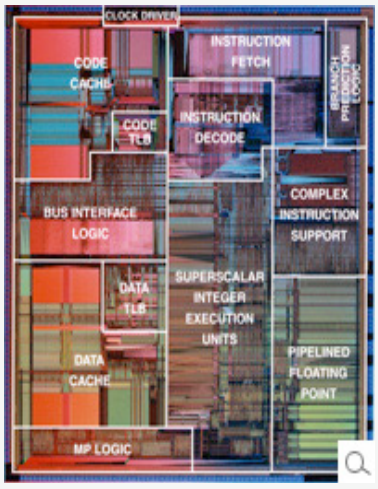
- Pretty Good Privacy is introduced. Pretty Good Privacy, or PGP, is an e-mail encryption program. Its inventor, software engineer Phil Zimmermann, created it as a tool for people to protect themselves from intrusive governments around the world. Zimmermann posted PGP on the Internet in 1991 where it was available as a free download. The United States government, concerned about the strength of PGP, which rivaled some of the best secret codes in use at the time, prosecuted Zimmermann but dropped its investigation in 1996. PGP is now the most widely used encryption system for e-mail in the world.

Graphics & Games

Original Movie Poster for Terminator 2: Judgment Day

- "Terminator 2: Judgment Day" opens. Director James Cameron's sequel to his 1984 hit "The Terminator," featured ground-breaking special effects done by Industrial Light & Magic. Made for a record $100 million, it was the most expensive movie ever made at the time. Most of this cost was due to the expense of computer-generated special effects (such as image morphing) throughout the film. Terminator 2 is one of many films that critique civilization's

1993. Components



Intel Pentium Processor diagram

- The Pentium microprocessor is released. The Pentium was the fifth generation of the 'x86' line of microprocessors from Intel, the basis for the IBM PC and its clones. The Pentium introduced several advances that made programs run faster such as the ability to execute several instructions at the same time and support for graphics and music.

Graphics & Games

Box Art for Doom

- "Doom" is released. id Software released Doom in late 1993. An immersive first-person shooter-style game, Doom became popular on many different platforms before losing popularity to games like Halo and Counter-Strike. Doom players were also among the first to customize the game's levels and appearance. Doom would spawn several sequels and a 2005 film.

Networking

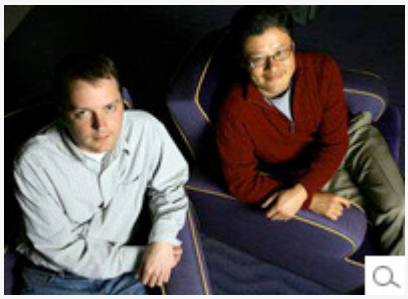
Screen Capture from Original Mosaic Browser

- The Mosaic web browser is released. Mosaic was the first commercial software that allowed graphical access to content on the internet. Designed by Eric Bina and Marc Andreessen at the University of Illinois's National Center for Supercomputer Applications. Mosaic was originally designed for a Unix system running X-windows. By 1994, Mosaic was available for several other operating systems such as the Mac OS, Windows and AmigaOS.

1994. Companies

Early Netscape diskett

- Netscape Communications Corporation is founded. Netscape was originally founded as Mosaic Communications Corporation in April of 1994 by Marc Andreessen, Jim Clark and others. Its name was soon changed to Netscape and it delivered its first browser in October of 1994. On the day of Netscape's initial public offering in August of 1995, it's share price went from $28 to $54 in the first few minutes of trading, valuing the company at $2 billion. Netscape hired many of Silicon Valley's programmers to provide new features and products and began the Internet boom of the 1990s.



Yahoo! founders Jerry Yang and David Filo, 2000

- Yahoo is founded. Founded by Stanford graduate students Jerry Yang and David Filo, Yahoo started out as "Jerry's Guide to the World Wide Web" before being renamed. Yahoo originally resided on two machines, Akebono and Konishiki, both named after famous Sumo wrestlers. Yahoo would quickly expand to become one of the Internet's most popular search engines.

Storage

Early Zip Drive with Disks

- The Iomega Zip Disk is released. The initial Zip system allowed 100MB to be stored on a cartridge roughly the size of a 3 ½ inch floppy disk. Later versions increased the capacity of a single disk from 100Mbytes to 2GB.

Compare your time line with your partner`s and then discuss the following questions.

a. Why do you think the twentieth century was such a revolutionary era in technology?
b. How may have people's lifestyles been changed in drastic ways with the use of technology?
c. What have been some negative effects on humanity with the development of computers?
d. If you had been a computer developer of the twentieth century, what might you have done differently? Why? Explain.
e. The computer industry generates billions of dollars annually. Considering that computers are used basically in every human activity, do you think the high cost of being able to use that technology is justified by the hard work it took to develop them? Explain why or why not.

2. Do the following reading carefully. It has been borrowed and partially adapted from the online site of the Florida State University at

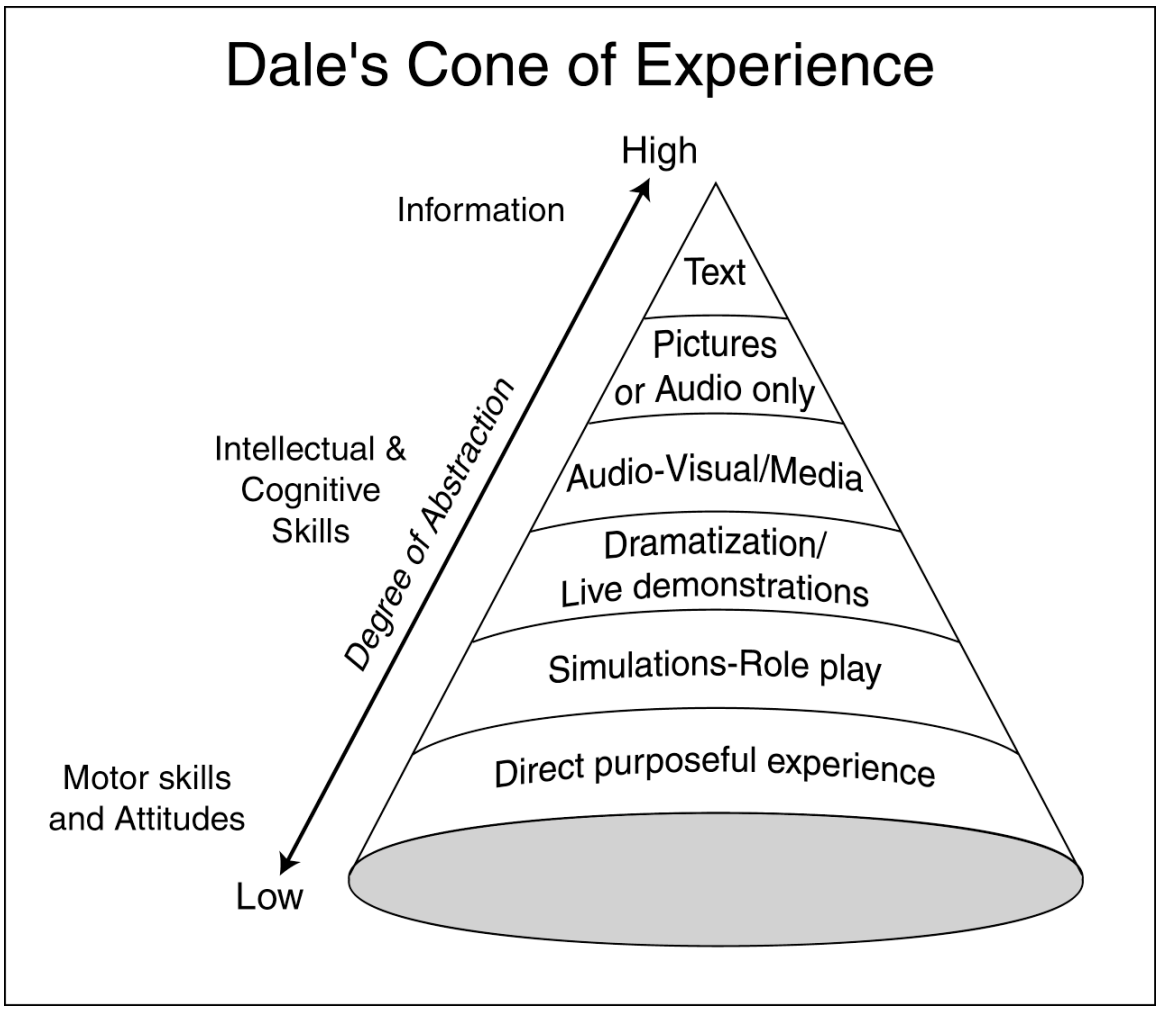
<http://learningforlife.fsu.edu/ctl/explore/onlineresources/i@fsu.cfm>, and it is part of the online resource Instruction at FSU: A Guide to Teaching & Learning Practices**.** Visit the site to download the whole document if you wish to do so.

Chapter 9 — Instructional Media: Chalkboards to Video

Different types of educational experiences exist -- from hands-on apprenticeships to role playing, from demonstrations to reading printed text. Some educators believe that different experiences are more or less effective for achieving different types of instructional outcomes. For example, text with pictures is not as effective as live demonstrations for teaching motor skills. Instructors who are considering the use of media should ask themselves, “How do I expect the media or type of learning activity to make learning more effective?”

Types of Instructional Media

- Real objects and models
- Printed text (books, handouts, worksheets)
- Printed visuals (pictures, photos, drawings, charts, graphs)
- Display boards (chalk, bulletin, multipurpose)
- Interactive whiteboards
- Overhead transparencies
- Slides and filmstrips
- Audio (tape, disc, voice)
- Video and film (tape, disc)
- Television (live)
- Computer software
- The Web



The diagram shows how Edgar Dale's "Cone of Experience" (1969) -- organized learning experiences according to the degree of concreteness each possesses. At the bottom is hands-on experience. As you ascend the cone, concrete experience begins to drop out, with stimuli becoming more abstract; the stimuli require more skill on the part of the learners to interpret the messages they carry. You can see why lectures, even illustrated lectures, are considered to be some of the most abstract types of presentations. For certain types of learning (such as changing attitudes or teaching motor skills), experiences at the bottom of the cone are more appropriate than those at the top.

Learning experiences at the bottom of the cone tend to hold student attention longer and involve active student participation.

Media at the top of the cone are said to be more passive but are suitable for transmitting large amounts of information quickly. Which is best depends upon your purposes and circumstances. While the Web is becoming popular for distributing other types of mediated messages, it is not always practical, and other types of media are more appropriate.

Why Use Media in Instruction?

As a rule, educational experiences that involve the learner physically and that give concrete examples are retained longer than abstract experiences such as listening to a lecture. Instructional media help add elements of reality -- for instance, including pictures or highly involved computer simulations in a lecture. Media can be used to support one or more of the following instructional activities:

- Gain attention. A picture on the screen, a question on the board, or music playing as students enter the room all serve to get the student's attention.
- Recall prerequisites. Use media to help students recall what they learned in the last class, so that new material can be attached to and built upon it.
- Present objectives to the learners. Hand out or project the day's learning objectives.
- Present new content. Not only can media help make new content more memorable, media can also help *deliver* new content (a text, movie, or video).
- Support learning through examples and visual elaboration. One of the biggest advantages of media is to bring the world into the classroom when it is not possible to take the student into the world.
- Elicit student response. Present information to students and pose questions to them, getting them involved in answering the questions.

 Provide feedback. Media can be used to provide feedback relating to a test or class exercise.
 Enhance retention and transfer. Pictures enhance retention. Instructional media help students visualize a lesson and transfer abstract concepts into concrete, easier to remember objects.
 Assess performance. Media is an excellent way to pose assessment questions for the class to answer, or students can submit mediated presentations as classroom projects.

Media Used to Enhance Presentations

The Chalkboard or Whiteboard

FSU has replaced the ubiquitous chalkboard with whiteboards in most classrooms. The whiteboard is one of the most basic forms of instructional media and is best used for emphasizing essential information and developing ideas as the class progresses.
 Put assignments due, the next assignment and due date, and the day's lesson objectives on the board before starting the class.
 Use the board to present a problem the class should be thinking about during the lecture.
 Use the board for graphics as well as text and formulas.

When Using the Whiteboard

 Include a whiteboard plan in your lesson outline that determines which aspects of the lesson will be illustrated on the board — list of concepts to be learned, timelines, outline for the day's presentation.
 Bring your own markers to class and carry plenty of spares.
 Use different colored markers to highlight important aspects of the lesson.
 Write neatly and horizontally, making certain your handwriting is large enough for students to read. Board work should be

organized so that students will be able to interpret their notes later.

- Write on the board in several places (top, bottom, right side, left side). Go to the back of the room to see if you can read what you have written from any location. Be sensitive to obstructions, including the heads of students, overhead projectors, etc., that may block the lower part of the board.
- Give students time to copy what has been written.
- Avoid modifying the board while students are copying information.
- Talk to the students, not the board. With a little practice, you will find that you can write while you are partially facing the class.

Document Cameras

Document cameras are located in many of the general purpose and technology enhanced classrooms on campus. With a document camera, you can display documents, books, graphics (ex. pictures, charts, and maps), and three-dimensional objects and project them so even students in the back of the class can see.

In most cases, the same rules that apply to the use of the chalkboard also apply to overhead projectors. Overheads, however, have several advantages — transparencies can be prepared in advance of the class, and it is easier to prepare graphics and pictures for the overhead than for the chalkboard.

Tips for Using the Document Camera

- The camera is best turned off when you are not directly referring to information on it. Many instructors use a piece of blank paper to cover part of a document so that only the point being developed is revealed.
- When preparing documents for display on the camera, use

san-serif fonts such as Arial, Helvetica, or Tahoma in a 24 pt. or larger font size. Margins should be set at 1 _ inches to avoid information being cut off the sides. When writing on displayed documents, use a medium to wide stroke marker and print clearly.

- Avoid using white paper as it produces a glare when projected. Blue paper or other similar pastel is a better choice. Likewise, three-dimensional objects are projected more clearly when placed on a darker background rather than on white paper or directly on the camera platform. Practice with different backgrounds to see which works best for you.
- Glossy paper in magazines and books may not project well because of glare. Practice with the camera settings before class to reduce glare or if possible consider copying the image onto different paper.
- Avoid the rapid paper flip. Consider placing your stack of papers on the cameral platform and sliding a sheet off when you are finished rather than taking off and repositioning a new sheet every time you change documents. Leave the document on long enough so the students have time to take notes but not past the point where you are finished talking about it.

LCD Projectors (Liquid Crystal Display Projectors).

Advantages of LCD's

- Since slides are stored in files on the computer, they can be made accessible to students or other instructors.
- Presentations are easily made using PowerPoint or other software applications. PowerPoint can also be used to prepare handouts and content outlines.
- Some instructors post their PowerPoint slides to their course sites so that students may download them for study purposes.
- Many of FSU's classroom technology installations include connecting a videocassette player and a document camera to

the computer. This installation allows instructors to project videos or images directly from a book to the screen through the LCD projector.

Instruction through the Use of LCD's

Students prefer consistent presentation of information. Consider standardizing the usage of your LCD slides, keeping in mind the following:

- The opening slide might be the title or main theme of the day.
- Subsequent slides might be key terms, discussion questions, and important concepts.
- Use the slides to tell a story. Talk to the students, not at them.
- Involve the students in discussion of the visuals.
- If you use slides regularly, the final or ending slide will become a signal to the students that class is over, with accompanying lack of interest and closure. Instead, use the last slide as a discussion device to allow students to synthesize information and bring closure to the topic.
- While using a standard series of slides, vary the layout and color for each lecture. All presentation software allows the choice of different backgrounds and color through the use of templates or master slides.
- Use sound clips, animations, and clip art with discretion.
- Avoid using too many slides. A good rule of thumb is to spend two or three minutes per slide.
- Be careful about infringing on another author's copyrights. If there is any doubt, get permission and inform students that you have permission.

Video or Film

Using video or film in classroom instruction has the advantage of presenting abstract ideas in a realistic context, which helps students grasp the abstract ideas more easily and to retain the material longer.

Examples of Use

- Filming students' in-class presentations and viewing the tape together offers students the opportunity of seeing themselves in action.
- In an English class, a TA might show students a scene from a Shakespearean play to set the context for a lecture.
- A political science instructor may use a tape of a politician who visited campus, or whose remarks were broadcast on C-SPAN.
- A chemistry class may be shown a videotape of an important, but dangerous and expensive experiment.
- In a communication class, the students themselves could be taped during a problem-solving session. Later, they can analyze the group interactions that occurred.
- In a statistical methods class, students can watch an online video overview of how to set up tables in SPSS that was recorded by the instructor using Camtasia, a screen capture and recording software.

When Using Video in the Classroom

- Do not show the entire tape/DVD if there is no need to do so. Think about why you are using the video and show only the applicable portions.
- Relate the video to what is being discussed in class and discuss relevance to every day issues or problems.
- Prepare a set of questions taken from the video that students might discuss or answer. Prepare students by providing an outline of the video's main points on the document camera,

whiteboard, or handout so that students know what to look for as they watch.

- Since video only presents a one-way flow of information, compensate for this lack of involvement by encouraging dialogues in other areas of the class such as group discussion.

When Using Video Online

- Online video can be used for screen capture and recording, simulations, demonstration of processes and other visual illustrations.
- Keep the length of the video short, no more than 3 – 5 minutes and follow up with a set of questions or an activity to be completed to hold students' attention and keep them on task. If the video is long, break it up into 3 – 5 minute modules for easier viewing with questions or points to consider in between.
- When using web-based media, be certain to inform students of general technical and computer requirements and provide links for downloading the necessary plug-ins and media players.

General Presentation Guidelines

Guidelines for a Variety of Instructional Media

- Visual aids should augment the presentation; they are not meant to be the entire presentation.
- It is important to be able to teach without them. Instructional aids may arrive late, or not arrive at all. Also, something may go wrong or break down. Even careful planning cannot cover every possibility.
- It is imperative that all instructional media are previewed before they are used in class or online. This will familiarize you with content and structure, as well as ensuring that no unfortunate (and sometimes embarrassing) mix-ups have occurred.
- Visuals are best kept simple, with minimal wording. They should always be readable from a distance (when reproducing

from texts and enlarging graphics). You can practice using the visual aids in the actual classroom before the lecture begins.

- The audience's line of vision should not be obstructed.
- Visual materials should be displayed only when the instructor is ready to use them, and they should be kept visible until the students have finished taking notes. You should remove the materials when you are ready to talk about something else, signaling that it is time for discussion or noting a subject change.
- Effective instructors talk to the students, not the visual aids.

Instructional Strategies Involving Media

While it is necessary to talk about how media might improve classroom lectures, the reality is that there are more effective types of learning activities. Probably the most studied and research based movement in the use of technology today is being done by Vanderbilt University in the areas of situated cognition and anchored instruction.

Situated cognition defines understanding as partially being a function of the context in which it is learned. Most of us have experienced a situation where we have learned something, but we cannot recall it when we need it. Or that we know that we should be able to solve a problem but the details escape us. This is known as inert knowledge. One reason for this lack of recall, according to John Seely Brown and others (1989), is that the knowledge was learned in a sterile classroom situation and was never applied in a real world context.

One instructional technique to reduce inert knowledge is anchored instruction; that is, to instruct using an experience common to the students. Instructors at Vanderbilt create an anchor by showing a 12-15 minute video clip that presents the context for problem solving. All the data the student needs to solve the problem is

contained in the video. Students work together in groups to find the data they need and solve the problem. The students present and defend their solutions, and the instructor provides feedback.
Most collaborative learning situations today involve the use of media in some way. The Web provides a way for students in different locations to collaborate on problem solving and learning. The realization that learning is a social as well as a mental process is important to the understanding of how media can improve learning.

Resources on the Use of Media

Books/Articles

- Azarmsa, R. (1991). *Educational computing: Principles and applications.* Englewood Cliffs, NJ: Educational Technology Publications.
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Section: Lesson Delivery 10 Chapter 9: Instructional Media
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- Pettersson, R. (1989). *Visuals for information: Research and practice*. Englewood Cliffs, NJ: Educational Technology Publications.

3. Reflect on your previous experience as a learner and note the impact of the technologies that were used by your teachers. Answer the following questions the best you can based on your discussion in class.

a. What media was used?

b. How did you like it?

c. What would have you done differently?

4. Think of an instructional situation for which you think your teachers might have used a specific technology but they did not. How would you have done it differently? Justify your choices and answers.

5. Based on your experience as a learner and think back of a learning experience in which you felt highly motivated and you achieved the objectives proposed. How did the media help to convey the instructional content? In what ways did the media help to create a learning environment that fit your needs? Now answer these two questions:

a. How are audio and video effective in creating learning situations more authentic?

b. How can media be used to involve students in learning?

6. Use the previous reading “Instructional Media: Chalkboards to Video”, a browser of your own choice, or visit your library to read about the following technological devices. In the corresponding spaces, write the name and the definition of each one, as well as some possible uses in TEFL. Discuss your findings with your partners.

Device	Name and Description	Uses in education
		
		
		
		
		
		
		

Images borrowed from the WWW, through Yahoo Images.

7. Work all together with your instructor and classmates. Bring to the class diverse media like a VHS, a DVD player, a TV, an overhead projector, an IPod, and any other available. Make sure you are allowed to manipulate and work with this equipment. Work in pairs with at least five different pieces of equipment and then complete the following chart.

Name of the device	**How do you turn it on?**	**How do you connect it to other equipment?**	**Is it mainly audio or audio and video equipment?**	**How do you use it?**	**How effective do you think it is in instruction?**
1.					
2.					
3.					
4.					
5.					

8. Keep a journal until the next tutorial on the instructional technology you see around or you encounter in you workplace. Take into account the following questions. What type of media was used in the instruction? How was it planned and sequenced? How was the progress of the students assessed and evaluated?

9. Log on to an assigned website and participate in the forum “Educational Uses of Audiovisual Media.” Provide three well elaborated comments to answer the following questions:

a. How is “audiovisual” media effective in teaching English?

b. How can we use audiovisual media to create authentic learning environments?

Reply to your partners posts.

Notes:

III. SECOND WORKSHOP: THE COMPUTER AND ITS DEVICES

General objectives

a. Develop a workable knowledge of the historical evolution of the computer, its major components, external devices and their functions.

b. Learn the uses of the computer as an educational resource in teaching English as a foreign language.

Specific Objectives:

- Know in brief the history of the development of computers.
- Tell when the computers started being used as educational tools.
- Name and explain the storage devices of a computer and their characteristics.
- Name and explain the input and output devices of a computer and their characteristics.

Readings

Do the following readings from the book *How to Teach English with Technology.*

Chapter 1: Technology in the classroom, pages 7-14.

Chapter 2: Word processors in the classroom, pages 15 -27.

Activities

1. Answer the following questions carefully.

   a. When did computers start being used as tools in education?

   b. What were the first educational uses given to computers?

   c. What is a data storage device?

   d. What is an input device?

   e. What is an output device?

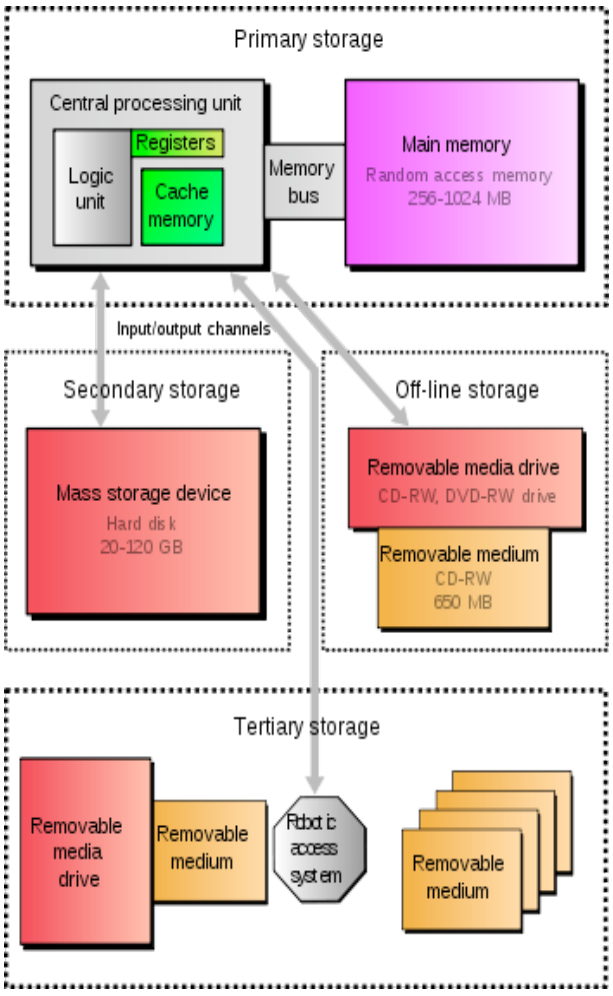
2. Computer data storage devices

Look at the following chart borrowed from

<http://en.wikipedia.org/wiki/Computer_data_storage> and read the names in the box

below. Next, identify the devices and media on the right and name them. Then draw lines to match them with the corresponding storage classification.

flash drive, sim cards, hard disk, CD, CD/DVD drives, SD card



1. _____

2._____

3._____

4._____

5._____

6._____

Images borrowed from the WWW, through Yahoo Images.

3. Input devices

Look at the following chart. It shows computer input devices. In your own words, describe how they are used to provide data and control signals to a computer. Share your conclusions with a partner.

Device	Uses
Mouse	
Keyboard	
Microphone	
Scanner	

4. Output devices

Complete the following chart by adding information about the characteristics and uses of the output devices listed. Discuss in group your conclusions.

Output Devices		
Devices	**Characteristics**	**Uses**
Monitor		
Printer		
Speakers		
Headsets		

5. Laptops and e-books

If possible, bring a laptop or an e-book to the classroom. Check with your local librarian to see if the CU has laptops available. Work in groups to discuss and decide how the software installed on the laptop might be used to teach English as a second language. Consider the word processors Word by Windows or Writer by Open Office, the browser and other programs installed. Then answer the following questions.

a. What are the advantages and disadvantages of a portable computer?
b. How is a laptop connected to a video beam projector?

c. How are they useful together?

Relate your ideas to the readings assigned in Chapter 9 *Instructional Media: Chalkboards to Video* and then report your conclusions and findings to the rest of the class.

6. Software

Look around and do some research about what kind of software to teach English is available in your country. You might consider the demos available and downloadable from the World Wide Web. Pick one of them and write a summary chart that includes the advantages and disadvantages of it. Report your findings to the tutor and the class.

7. Modems and access to Internet

Take a trip to a local Internet provider and ask a salesperson to explain to you the services they offer, the costs, the advantages and disadvantages of the Internet service they provide. Ask about the modems to access Internet and how they work. Note down the information obtained and complement it with some brochures the company might have available. Bring your notes and brochures to the tutorial and discuss them with your partners.

8. Discuss with your partners and tutor about the educational uses of the computers.

9. Task Files

Complete the Task Files for chapters 1 and 2 on pages 160 and 161 in your textbook. Check your answers on the section called Task File Key, pages 175, 176.

10. Your CD-ROM

Use your CD-ROM to listen to experienced teachers talk about the subjects covered in chapters 1 and 2. Watch the tutorials and visit the links provided on the Webliography for each chapter. Then write notes.

IV. THIRD WORKSHOP: INFORMATION AND COMMUNICATION TECHNOLOGIES

General objective

Analyze the foundations of the ICT's and their uses in the processes of teaching and learning English as a foreign language.

Specific objectives

- Get a grasp of the processes followed to use websites.
- Know the bases of Internet-based project work.
- Understand the uses of email, chat, blog, wikis, and podcast for educational purposes.
- Use online reference tools to improve the English-learning experience.

Readings

Do the following readings from the book *How to Teach English with Technology.*

Chapter 3: Using websites	Pages 27-43
Chapter 4: Internet-based project work	Pages 44-61
Chapter 5: How to use email	Pages 62-70
Chapter 6: How to use chat	Pages 71-85
Chapter 7: Blog, wikis and podcasts	Pages 86-102
Chapter 8: Online reference tools	Pages 103-112

Activities

Chapter 3: *Using Websites*

1. Use a search engine to find a "useful" either ESL related or authentic website for a hypothetical lesson plan. Evaluate it based on accuracy, currency, content, and functionality as explained in chapter 3. Once you have found it, plan a short lesson addressed to your current students. Show your lesson to your tutor´

Chapter 4: Internet-based project work

2. Based on this chapter, discuss with your classmates the following questions:

a. What is an Internet-based project work?

b. How can it be used to teach English?

c. What are Internet-based simulations? Give examples.

d. What are some examples of basic projects?

e. What are webquests? How are they useful in English learning environments?

3. Follow the steps given in Chapter 4: *Internet-based project work*, to create a short webquest. Select one of the topics from your school curriculum and use a search engine to find a place to upload your mini-project. Give the address to your tutor and classmates and ask them to visit the place.

Chapter 5: How to use email

4. If you do not have an email account, have someone help you open one. Use an email provider of your choice and give your address to your tutor and classmates. Ask them to send mail to you.

5. Work in groups and make a poster about the uses of email for learning English as a foreign language. Show your poster to your classmates and take turns to explain your results.

6. Participate in the online forum *The Educational Uses of ICT's in the Classroom*. Provide three in depth comments to answer the questions posted.

Chapter 6: How to use chat

7. Answer the following questions based on the information found in this chapter.

a. What is chat?

b. What are some of the characteristics of chat?

c. What types of chat are there? Describe them.

d. What are the benefits of using chat in language teaching?

e. What technical skills do teachers and learners need to use chat?

8. Follow the instructions given in Chapter 6 to structure a short lesson plan using text chat. Hand in your work.

Chapter 7: Blogs, wikis and podcasts

9. Describe the following software and provide details of how it can be used for educational purposes. Use a search engine or check the sites recommended in the textbook to find places that provide those services for free. Write down the places. Discuss your work with your partners.

	Blogs	**Wikis**	**Podcasts**
Description			
Educational uses			
Examples of sites			

Chapter 8: Online reference tools

10. With the information given in this chapter, work on the following questions and discuss your answers with your classmates.

a. What advantages do electronic dictionaries and thesauruses offer to foreign language learners?

b. What are corpuses?

c. How can encyclopedias be used in research and project work when learning a foreign language?

Task Files

11. Complete the Task Files for chapters 3, 4, 5, 6, 7 and 8 on pages 162-169 in your textbook and afterwards check your answers on the section Task File Key, pages 176-181.

Your CD-ROM

12. Use your CD-ROM to listen to experienced teachers talk about the subjects covered in chapters 3, 4, 5, 6, 7, and 8. Watch the tutorials and visit the links provided on the Webliography for each chapter.

V. FOURTH WORKSHOP: ICT FOR TEACHING AND LEARNING

General Objective

Define the importance of the ICT's in the process of learning English as a foreign language from the lesson-planning processes perspective.

Specific objectives

- Acquire a working knowledge of technology-based courseware.
- Understand and know online solutions to produce electronic materials.
- Know the importance of e-learning as a current and effective tool for teaching and training.
- Create basic tools to face the constant changes in ICT and its relevance for educational purposes.
- Design lesson plans with the help of technology.

Readings

Chapter 9: Technology-based courseware	pages 113-125
Chapter 10: Producing electronic materials	pages 126-135
Chapter 11: E-learning: online teaching and training	pages 136-147
Chapter 12: Preparing for the future	pages 148-158

Activities

Chapter 9: Technology-based courseware

1. Based on this chapter, answer the following questions and check your results with your classmates.

a. How are DVDs useful in classroom environments?

b. What are some activities that can be done in class using CD-ROMS?

c. What specific characteristics do you have to consider when choosing a CD-ROM?

d. What is computer-based testing and what advantages and disadvantages does it offer to the learners?

e. How are electronic portfolios useful for learners?

f. What are IWBs and how do they affect learners' motivation?

Chapter 10: Producing electronic materials

2. Use the suggested addresses on chapter 10, or any other address of your own, to produce a printable electronic material (e.g. a puzzle). Bring extra copies to share with your classmates and have them solve the exercise.

Chapter 11: E-learning: online teaching and training

3. In your own words, describe the characteristics of the following types of learning.

Type of Learning	**Description**
Distance Learning	
Open Learning	
Online Learning	
Blended Learning	

Chapter 12: Preparing for the future

4. Use the information on this chapter to answer the following questions and then check your decisions with your classmates.

a. What is e-learning?

b. What are some examples of learning situations that make use of a computer?

c. What five questions need to be answered satisfactorily for a course or program to emonstrate good practice in online learning?

d. What are discussion lists and online groups?

e. How are they useful in learning a foreign language?

5. Lesson planning

Use the following format to plan one of your lessons. Decide on the language objectives, the contents, the sequence of activities, the media and the materials, the time you are going to spend in each activity and finally the way you are going to evaluate the learning situations.

LESSON PLAN Date_____/_____/_____

Objectives:

Contents	Activities	ICT's and Materials	Time	Evaluation

Task files

6. Complete the Task Files for chapters 9, 10, 11, and 12 on pages 170-174 in your textbook. Check your answers on the sectionTask File Key, pages 181-182.

Your CD-ROM

7. Use your CD-ROM to listen to experienced teachers talk about the subjects covered in the corresponding studied chapters. Watch the tutorials and visit the links provided on the Webliography for each section of the book.

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