

Media supporting information technology

[Technology](#), [Information Technology](#)



? ROLE OF MEDIA TO PROMOTE INFORMATION TECHNOLOGY
ROLE OF MEDIA TO PROMOTE INFORMATION TECHNOLOGY SUBMITTED TO: Ms. Tazeen Erum, Faculty Business Communication Institute of Business Management

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September 02, 2007 Ms. Tazeen Erum, Faculty Business Communication

Institute of Business Management Korangi Creek Karachi. Dear Ms. Erum:

Here is the report on " Role of Media to Promote IT," which you assigned us on August 5, 2007 at lobm. I hope you find our effort according to your requirements and expectations.

The contents of this report prove that Media has been major player in the promotion of IT. The report is based on our observations, technical know how and various sources which have been mentioned at the end of this report.

Humanity has progressed from agricultural revolution to the industrial revolution and is now moving to an information revolution, where knowledge is the prime resource for production of goods and services. Just as machines have extended man's mechanical power and his convenience and comfort.

The invention of printing was the first big break-through in Information Technology.

It enabled literacy and education to go up from 10% to over 80% within 50 years by making available vast amount of reading material. That reading also led to the Reformation in Europe. Other break-through for Information Technology were the inventions like telegraphy, telephony, wireless or radio, television, broadcasting, computers (from room size to desk top to lap top to palm top and very soon, wearable ones.) Information Technology as commonly pictured by computers, is extending man's mind or brain or intellectual power.

Information Technology devices like microprocessors are becoming mass appliances from pace makers for the heart, hearing aids, and efficiency enhancers in automobile engines and devices to steer space vehicles on the moon. The computing power in the few micro processors that are now in a Ford Motor Car is much more than all the computing power that was put in the space vehicle that landed the first men on the moon and brought them back.

I hope the report will be self explanatory, if not or you have any ambiguity, please contact us Sincerely Hozefa Rasool Ather Khan

INTRODUCTION TO INFORMATION TECHNOLOGY Information technology (IT), as defined by the Information Technology Association of America (ITAA), is " the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware. " In short, IT deals with the use of electronic computers

and computer software to convert, store, protect, process, transmit and retrieve information, securely.

Recently it has become popular to broaden the term to explicitly include the field of electronic communication so that people tend to use the abbreviation ICT (Information and Communications Today, the term information technology has ballooned to encompass many aspects of computing and technology, and the term is more recognizable than ever before. The information technology umbrella can be quite large, covering many fields. IT professionals perform a variety of duties that range from installing applications to designing complex computer networks and information databases.

A few of the duties that IT professionals perform may include: Data management Computer networking Computer engineering Database systems design Software design Management information systems Systems management or System administration The use of information technology is penetrating a still wider part of human life, linking areas of human life and making different media and technologies converge and dissolve into new ones, broadening the scope of interest for ISD research accordingly.

Various academic disciplines deal with issues related to the use and development of information technology: information systems research, human-computer interaction, computer supported collaborative work, theoretical computer science etc. As these disciplines are getting more and more intertwined and interdependent the need for an integrating conceptual basis is becoming urgent. The hypothesis behind the present collection of

papers is that activity theory is such a suitable theoretical basis. Ultimately, information technology is about some familiar ideas: Improved access to information

Increased staff productivity Lower operations costs APPLICATIONS OF INFORMATION TECHNOLOGY Because new technologies such as personal computers are complex and an element of uncertainty exists in the minds of decision makers with respect to the successful adoption of them, people form attitudes and intentions toward trying to learn to use the new technology prior to initiating efforts directed at using. Attitudes towards usage and intentions to use may be ill-formed or lacking in conviction or else may occur only after preliminary strivings to learn to use the technology evolve.

Thus, actual usage may not be a direct or immediate consequence of such attitudes and intentions. (Bagozzi et al. 1992) PC Revolution is now well into its third decade and the continuing improvements in the user friendliness of PCs and Macs, printers and scanners, and software and the Internet has been enormous. The major application areas of Information Technology are briefly described. Data Management Data management comprises all the disciplines related to managing data as a valuable resource.

The official definition provided by DAMA is that " Data Resource Management is the development and execution of architectures, policies, practices and procedures that properly manage the full data lifecycle needs of an enterprise. " This definition is fairly broad and encompasses a number of professions which may not have direct technical contact with lower-level aspects of data management, such as relational database management.

Computer Networking Computer networking is the engineering discipline concerned with communication between computer systems or devices.

Communicating computer systems constitute a computer network and these networks generally involve at least two devices capable of being networked with at least one usually being a computer. The devices can be separated by a few meters (e. g. via Bluetooth) or nearly unlimited distances (e. g. via the Internet). Computer networking is sometimes considered a sub-discipline of telecommunication, and sometimes of computer science, information technology and computer engineering. Computer networks rely heavily upon the theoretical and practical application of these scientific and engineering disciplines.

Examples of networks are the Internet, or a small home local area network (LAN) with two computers connected with standard networking cables connecting to a network interface card in each computer. **Data Base Management System** The Data Base Management System accepts requests for data from the application program and instructs the operating system to transfer the appropriate data. When a DBMS is used, information systems can be changed much more easily as the organization's information requirements change. New categories of data can be added to the database without disruption to the existing system.

Organizations may use one kind of DBMS for daily transaction processing and then move the detail onto another computer that uses another DBMS better suited for random inquiries and analysis. Overall systems design decisions are performed by data administrators and systems analysts.

Detailed database design is performed by database administrators.

Computer Software Computer Software of programs, enables a computer to perform specific tasks, as opposed to its physical components (hardware) which can only do the tasks they are mechanically designed for.

The term includes application software such as word processors which perform productive tasks for users, system software such as operating systems, which interface with hardware to run the necessary services for user-interfaces and applications, and middleware which controls and coordinates distributed systems. Management Information System

Management Information Systems (MIS) is a general name for the academic discipline covering the application of people, technologies, and procedures.

Collectively called information systems, to solve business problems.

MIS are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making, e. g. Decision Support Systems, Expert systems, and Executive information systems. Computer Simulation A computer simulation, a computer model or a computational model is a computer program that attempts to simulate an abstract model of a particular system.

Computer simulations have become a useful part of mathematical modelling of many natural systems in physics, chemistry and biology, human systems in economics, psychology, and social science and in the process of engineering new technology, to gain insight into the operation of those

systems. Traditionally, the formal modeling of systems has been via a mathematical model, which attempts to find analytical solutions to problems which enables the prediction of the behaviour of the system from a set of parameters and initial conditions.

Computer simulations build on, and are a useful adjunct to purely mathematical models in science, technology and entertainment. HISTORY OF INFORMATION TECHNOLOGY History of Information Technology is Characterized by a principal technology used to solve the input, processing, output and communication problems of the time: 1. Pre-mechanical 2. Mechanical 3. Electromechanical and 4. Electronic THE PRE-MECHANICAL AGE: 3000 B. C. - 1450 A. D. A. Writing and Alphabets--communication. 1. First humans communicated only through speaking and picture drawings. 2. 3000 B. C. the Sumerians in Mesopotamia (what is today southern Iraq) devised uniform 3. Around 2000 B. C. , Phoenicians created symbols 4. The Greeks later adopted the Phoenician alphabet and added vowels; the Romans gave the letters Latin names to create the alphabet we use today. B. Paper and Pens--input technologies. 1. Sumerians' input technology was a stylus that could scratch marks in wet clay. 2. About 2600 B. C. , the Egyptians write on the papyrus plant 3. Around 100 A. D. , the Chinese made paper from rags, on which modern-day papermaking is based. C. Books and Libraries: Permanent Storage Devices. . Religious leaders in Mesopotamia kept the earliest " books" 2. The Egyptians kept scrolls 3. Around 600 B. C. , the Greeks began to fold sheets of papyrus vertically into leaves and bind them together. D. The First Numbering Systems. 1. Egyptian system: The numbers 1-9 as vertical lines, the number 10 as a U or circle, the number

100 as a coiled rope, and the number 1, 000 as a lotus blossom. 2. The first numbering systems similar to those in use today were invented between 100 and 200 A. D. by Hindus in India who created a nine-digit numbering system.

3. Around 875 A. D. the concept of zero was developed. THE MECHANICAL

AGE: 1450 - 1840 A. The First Information Explosion. 1. Johann Gutenberg

(Mainz, Germany), invented the movable metal-type printing process in

1450. 2. The development of book indexes and the widespread use of page

numbers. B. The first general purpose " computers" 1. Actually people who held the job title " computer: one who works with numbers. " A. Slide Rules,

the Pascaline and Leibniz's Machine. 1. Slide Rule. Early 1600s, William

Oughtred, an English clergyman, invented the slide rule Early example of an

analog computer. . The Pascaline. Invented by Blaise Pascal (1623-62). The

Electromechanical Age: 1840 - 1940 The discovery of ways to harness

electricity was the key advance made during this period. Knowledge and

information could now be converted into electrical impulses. A. The

Beginnings of Telecommunication. 1. Voltaic Battery: late 18th century. 2.

Telegraph: Early 1800s. 3. Telephone and Radio: Alexander Graham Bell.

1876 4. Followed by the discovery that electrical waves travel through space

and can produce an effect far from the point at which they originated. 5.

These two events led to the invention of the radio: Guglielmo Marconi. 1894

B. Electromechanical Computing 1. Herman Hollerith and IBM. 2. The

International Business Machines Corporation (IBM). 3. Paper tape stored data

and program instructions. THE ELECTRONIC AGE: 1940 - PRESENT. A. First

Tries: Early 1940's, Electronic vacuum tubes. B. Eckert and Mauchly. 1. The

First High-Speed, General-Purpose Computer Using Vacuum Tubes:

Electronic Numerical Integrator and Computer (ENIAC) The ENIAC team (Feb 14, 1946). Left to right: J. Presper Eckert, Jr. ; John Grist Brainerd; Sam Feltman; Herman H.

Goldstine; John W. Mauchly; Harold Pender; Major General G. L. Barnes;

Colonel Paul N. Gillon. 2. The First Stored-Program Computer: The

Manchester University Mark I (prototype). 3. The First General-Purpose

Computer for Commercial Use: Universal Automatic Computer. B. The Four

Generations of Digital Computing. I. The Second Generation (1959-1963). 1.

Vacuum tubes replaced by transistors as main logic element. AT's Bell

Laboratories, in the 1940s Crystalline mineral materials called

semiconductors could be used in the design of a device called a transistor 2.

Magnetic tape and disks began to replace punched cards as external storage

devices. 3. Magnetic cores (very small donut-shaped magnets that could be

polarized in one of two directions to represent data) strung on wire within

the computer became the primary internal storage technology. II. The Third

Generation (1964-1979): Advanced programming languages like BASIC

developed. III. The Fourth Generation (1979- Present). INTRODUCTION TO

MEDIA " Materials that holds and transmit data in any form including

Newspapers, Multimedia Presentations, Disk Drives, Optical disks, Magnetic

Tape, Cable and many more. In other definition Media is defined as, "

Messages that are distributed through the technologies, principally text in

books, study guides and computer networks; sound in audio-tapes and

broadcast: pictures in video-tapes and broadcast; text, sound and/or pictures

in a teleconference are termed under Media. " There are three main types of

media: Print Electronic Published FORMS & APPLICATIONS OF MEDIA

Journalism Journalism is a discipline of collecting, analyzing, verifying, and presenting information regarding current events, trends, issues and people.

Those who practice journalism are known as journalists.

News-oriented journalism is sometimes described as the " first rough draft of history" (attributed to Phil Graham), because journalists often record important events, producing news articles on short deadlines. While under pressure to be first with their stories, news media organizations usually edit and proofread their reports prior to publication, adhering to each organization's standards of accuracy, quality and style. Many news organizations claim proud traditions of holding government officials and institutions accountable to the public, while media critics have raised questions about holding the press itself accountable.

Broadcasting Broadcasting is the distribution of audio or video signals to a number of recipients (" listeners" or " viewers") that belong to a large group. This group may be the public in general, or a relatively large audience within the public. Thus, an Internet channel may distribute text or music worldwide, while a public address system in; for example, a workplace may broadcast very limited ad hoc SoundBits to a small population within its range. The sequencing of content in a broadcast is called a schedule. Internet

The Internet (also known simply as " the Net" or " the Web") can be briefly understood as " a network of networks". Specifically, it is the worldwide, publicly accessible network of interconnected computer networks that transmit data by packet switching using the standard Internet Protocol (IP). It

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consists of millions of smaller domestic, academic, business, and governmental networks, which together carry various information and services, such as electronic mail, online chat, file transfer, and the interlinked Web pages and other documents of the World Wide Web.

Advertising

Advertising is paid, one-way communication through a medium in which the sponsor is identified and the message is controlled. Variations include publicity, public relations, product placement, sponsorship, underwriting, and sales promotion. Every major medium is used to deliver these messages, including: television, radio, movies, magazines, newspapers, the Internet and billboards. Advertisements can also be seen on the seats of grocery carts, on the walls of an airport walkway, on the sides of buses, heard in telephone hold messages and in-store public address systems.

Advertisements are usually placed anywhere an audience can easily and/or frequently access visuals and/or audio. MEDIA PROMOTING INFORMATION TECHNOLOGY Just as chemical or metallurgical or electrical technologies enable the processing of raw materials into usable goods, to satisfy man's and societies' needs so does information technology help the storage, processing, transmission and exploitation of information to satisfy a person's, company's, society's or government's needs for information. The invention of printing was the first big break-through in Information Technology.

It enabled literacy and education to go up from 10% to over 80% within 50 years by making available vast amount of reading material. That reading also led to the Reformation in Europe. Other break-through for Information

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Technology were the inventions like telegraphy, telephony, wireless or radio, television, broadcasting, computers (from room size to desk top to lap top to palm top) BROADCASTING REVOLUTION Digital audio and digital video have revolutionized broadcast engineering in many respects.

Broadcast studios and control rooms are now already digital in large part, using non-linear editing and digital signal processing for what used to take a great deal of time or money, if it was even possible at all. Mixing consoles for both audio and video are continuing to become more digital in the 21st Century, as is the computer storage used to keep digital media libraries. Effects processing and TV graphics can now be done much more easily and professionally as well. Other devices used in broadcast engineering are telephone hybrids, broadcast delays, and dead air alarms.

See the glossary of broadcast engineering terms for further explanations.

PRINTING AS STRONGER MEDIA Within fifty or sixty years of the invention of the printing press, the entire classical canon had been reprinted and widely promulgated throughout Europe. Now that more people had access to knowledge both new and old, more people could discuss these works. Furthermore, now that book production was a more commercial enterprise, the first copyright laws were passed to protect what we now would call intellectual property rights.

A second outgrowth of this popularization of knowledge was the decline of Latin as the language of most published works, to be replaced by the vernacular language of each area, increasing the variety of published works. Paradoxically, the printing word also helped to unify and standardize the

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spelling and syntax of these vernaculars, in effect 'decreasing' their variability. This rise in importance of national languages as opposed to pan-European Latin is cited as one of the causes of the rise of nationalism in Europe. VIRTUAL UNIVERSITY

The Virtual University is based completely on modern Information and Communication Technologies. It provides extremely affordable world class education to aspiring students all over the country. Using free-to-air satellite television broadcasts and the Internet, the Virtual University allows students to follow its rigorous programs regardless of their physical locations. It thus aims at alleviating the lack of capacity in the existing universities while simultaneously tackling the acute shortage of qualified professors in the country.

By identifying the top Professors of the country, regardless of their institutional affiliations, and requesting them to develop and deliver hand-crafted courses, the Virtual University aims at providing the very best courses to not only its own students but also to students of all universities worldwide. EFFICIENT MEDIA REPORTING As newspapers, magazines, trade publications and newsletters creep on to the Web; this swells the demand for reporters, who can keystroke simple sentences and strings of numbers. New media positions do not increase the job market for journalists.

For this purpose, reporting is defined as nuts-and-bolts, no-nonsense information-gathering and packaging. Reporting wants just the facts. Journalism entails investigation, explanation and a point of view. Journalists are story-tellers, fascinated with the human experience, alert to the drama of

conflict and struggle, infinitely curious about the motives and meanings behind events. Reporters use nouns and verbs as blunt utilitarian instruments. Journalists indulge in figures of speech; they use words as symbols, to evoke empathy, indignation, pity or anger.

Most of what appears in Star or the National Enquirer is journalism, albeit of a very ripe kind. Most of Investor's Business Daily is reporting. ELECTRONIC NEWSPAPER In the late 1990's newspapers began offering their content on the Internet in record numbers. By the end of the decade, more than 1, 000 North American newspapers offered online versions, most available to Internet users free of charge. Electronic newspapers spared publishers one of their highest expenses—newsprint—and many brought publishers additional advertising revenue.

Today Newspapers on the web offers readers the same content as its print publication as well as stories and features available only in its online version. ANALYSIS OF INFRA-STRUCTURE The government firmly believes in bringing the Pakistani media at par with the international standards and a total of 52 media development projects are being launched in the year 2007-08 with record allocation of six billion rupees, according to Federal Minister for Information and Broadcasting Muhammad Ali Durrani.

Rs. 148. 039 million has been earmarked for the media development projects in NWFP, which demonstrates the government's firm resolves to take all the federating units along in the development process. The Laram Top RBS has been established at the cost of Rs. 27. 97 million and is designed to serve around 450, 000 people, while the RBS at Bajaur Agency, established with

the total cost of 34. 733 million, is expected to cover 75, 000 households, he said.

The projects will not only carry the benefits of the modern age to distant regions of the country but will also bring affordable entertainment at the doorsteps for the common public. Islamabad Media University will be launched in the federal capital within next two months at a cost of Rs. 500 million, followed by setting up of its provincial campuses, including the Peshawar campus, in the second phase. Media University will not only offer specialized courses in media and journalism but will also initiate various research projects on media related issues. Rs. 35. 55 million will be spent to ensure full FM Radio coverage on Motorways sections M-1 which links Peshawar with Islamabad, and M-2, connecting Islamabad to Lahore. FM facility on the motorways will not only make the 500 KM-long journey from Peshawar to Lahore informative and pleasant but will also provide better opportunities to the media sector to expand itself in those gaps which are desperately needed to be filled in. Besides this, up-linking stations will also be established in Islamabad as well as in all the provincial capitals, including Peshawar, which will cost around 49. 81 million rupees. These up-linking facilities would provide efficient and high quality information flow between the network and the subscriber. Snap-shot of Current Pakistan IT and Communication are stated below: TV sets 70 million Cable Connections 35 million Daily/Periodical Papers 1500 Telephone Connections 65 million Mobile Connections 95 million Internet Connections 1 million References Internews Asia Pacific; www.internews.org/regions/asia/default.shtm The Media Handbook; by Hellen E Katz, 2003

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Pakistan Telecommunication Authority; [www. pta. gov. pk](http://www.pta.gov.pk) Statistics Bureau
of Pakistan; [www. statpak. gov. pk](http://www.statpak.gov.pk) Media Technology and everyday life in
Europe; Roger Silverstone, 2005. World Bank; [www. worldbank. org](http://www.worldbank.org)
Wikipedia Encyclopedia; [www. wikipedia. com](http://www.wikipedia.com) University of Alabama, Dept.
of Telecom and Film; [http://www. tcf. ua. edu/AZ/ITHistoryOutline. htm](http://www.tcf.ua.edu/AZ/ITHistoryOutline.htm).
University of Arhus, Dept. of Computer Science; [denmarkhttp://www. cs. aau.
dk/SJIS/journal/volumes/volume12/articles/01-intro_p3-14. pdf](http://www.cs.aau.dk/SJIS/journal/volumes/volume12/articles/01-intro_p3-14.pdf).