PGJMC (S2)-04

New Media and Computer Applications

SEMESTER - 2

JOURNALISM AND MASS COMMUNICATION

BLOCK - 1



KRISHNA KANTA HANDIQUI STATE OPEN UNIVERSITY

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JOURNALISM AND MASS COMMUNICATION
NEW MEDIA & COMPUTER APPLICATIONS
BLOCK - 1

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COURSE INTRODUCTION:

COURSE INTRODUCTION

'New Media and Computer Application' is the fourth course of the second semester PGJMC programme. This course will introduce you to new media and give you the basic computer knowledge necessary for a media student. With the advent of computers and particularly with the emergence of the new media, media and journalism has undergone great transformation. And as a student of Mass Communication, this knowledge is extremely important for you. We expect you to gain a thorough and comprehensive idea about new media technology and computer application after completion of this course.

The Course is divided into two blocks:

Block 1: New Media
Block 2: Computer Application

Each unit of these blocks includes some along-side boxes to help you know some of the difficult, unseen terms. Some "EXERCISES" have been included to help you apply your own thoughts. You may find some boxes marked with: "LET US KNOW". These boxes will provide you with some additional interesting and relevant information. Again, you will get "CHECK YOUR PROGRESS" questions. These have been designed to self-check your progress of study. It will be helpful for you if you solve the problems put in these boxes immediately after you go through the sections of the units and then match your answers with "ANSWERS TO CHECK YOUR PROGRESS" given at the end of each unit. you in making your learning more active and efficient. And, at the end of each section, you will get "CHECK YOUR PROGRESS" questions. These have been designed to self-check your progress of study. It will be better if you solve the problems put in these boxes immediately after you go through the sections of the units and then match your answers with "ANSWERS TO CHECK YOUR PROGRESS" given at the end of each unit.

BLOCK INTRODUCTION

'New Media' is the first block of the course on New Media and Computer Application. In this block you will get a basic idea of new media. Then you will learn about the history of computers and the internet revolution. We will then discuss about digital media. Also we will deal with Online journalism and Online newspapers. The block has six units.

UNIT – 1: Introduction to New Media

UNIT – 2: Impact of New Media

UNIT – 3: Computer Revolution and Internet

UNIT – 4: Digital Media

UNIT – 5: Online Journalism

UNIT – 6: Online Newspapers

UNIT-1: INTRODUCTION TO NEW MEDIA

UNIT STRUCTURE

1.1 Learning Objectives

1.2 Introduction

1.3 Concept of new media

1.3.1 Definition

1.3.2 Difference between conventional media and new media

1.4 Characteristics of new media

1.5 Most common vehicles of new media

1.6 Let us sum up

1.7 Further reading

1.8 Answers to check your progress

1.9 Possible questions

1.1 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Define new media,
- Distinguish between new media and conventional media,
- Identify the characteristics of new media,
- Name the early vehicles of new media

1.2 INTRODUCTION

New media and its ever-expanding technologies play a vital role in our day-to-day activities. The term must be vaguely familiar to you but as a Mass Communication and Journalism student you must understand 'new media' in its totality. This course on New Media fulfills this very end.

In this first unit, you will get a basic understanding of new media. Here, we will introduce you to the concept of new media, the characteristics of new media and the most common vehicles of new media.

This unit will guide you in your basic understanding of new media and its varying components. So, let us now get into the first section which will define the concept of new media.

1.3 CONCEPT OF NEW MEDIA

Press, television, radio, cinema and the telephone are the conventional forms of media which we have become so accustomed to. But apart from these forms of communication there is another form of communication which has spread its wings in the recent past. This new form of communication can be termed as the 'new media'.

Do you not always wish that you could send information as quickly as possible? Do you not wish that whatever information you send reaches exactly the way you sent it? New media helps you in this. With the advent of new media, information sharing and spreading has become a much easier experience now.

You can send letters, photographs, music files and other data to any part of the world. And you can do so in minimal time and with exact accuracy. New media has brought the world closer and nothing seems to be out of your reach in the present times. But how that happens and what new media exactly is will be defined in the following sections. So, let us move on further to understand the concept better.

1.3.1 DEFINITION OF NEW MEDIA

By now you must have got a fair understanding of the concept of 'new media'. But media scholars have defined this concept in their own unique ways. There is no one definition for it as different scholars have explained it in different words. In simple parlance, new media is a term meant to encompass digital or computerised networks to help us share and spread information. Digital media which is interactive, includes two-way communication and necessitates some form of computing can be referred to as the new media.

The Business Dictionary defines new media as an "electronic interactive media like the internet." Another definition states that, "New media is a catch-all term for all forms of electronic communication that have appeared or will appear since the original mainly text-and-static picture forms of online communication."

Therefore, new media is basically a generic term for the several forms of electronic communication that have been made possible since the inception and growth of computer technology.

1.3.2 DIFFERENCE BETWEEN CONVENTIONAL MEDIA AND NEW MEDIA

Now that the concept of new media has been discussed in detail in the previous two sections, we can now move on to understand the difference between new media and old media.

Till the 1980s the term 'media' referred primarily to print media, television, radio and cinema. But the last 25 years has seen a major development in computer technology which has given rise to what we now know as the 'new media'.

It is called new media in relation to the 'old' forms of media like newspapers, magazines, direct mail advertising, television, radio etc. In their original incarnation, these old or conventional forms of media did not require computer technology but in the present scenario, they do. In fact, it won't be wrong to say that many of these 'new media' emerged by merging the older medium with computer chips and a hard drive.

However, the vital points that distinguish new media from the media that preceded it are:

- Old media has geographical limitations. Newspapers and TV stations can only reach to a certain geographical area. New media, however, has a far wider reach than the conventional forms. If newspapers want to reach out to a wider readership, they need to take the help of new media. The growth of online newspapers is an example of this. The online versions of major newspapers are now accessible through the Internet.
- Old media communication is strictly one-way. The content provider sends information to the consumer, and the consumer pays money for it. There is no provision for the consumer to send across his views or information. But new media

communication is inherently two-way. The consumer is active as new media offers an opportunity to interact and even intervene in the communication process. So, you can now become a part of the communication process rather than just being a plain recipient of information, as was the case with conventional media. Conventional media forms are now using new media technologies to receive audience feedback.

- The old media market has limited number of 'players'. There is a natural limit to the number of newspapers or radio stations or television channels in any given area. New media, on the other hand, has unlimited number of 'players'. The World Wide Web has several websites on one single topic. Every individual, can in fact, have his very own website. Even in terms of other new media technologies like mobile phones or DVDs or cameras, the number of products in the market is unlimited.
- Old media content providers have complete control over what the consumer hears or sees. Newspapers editors or TV channels can exercise their control over the content. In case of new media, however, the providers cannot control what the consumer wants to see or read or hear.
- The presentation is more important than the content in old media vehicles. Newspapers and television channels have to attract the viewers' attention to the content through attractive presentation. In new media, however, the content is more important than the presentation. For instance, in case of the World Wide Web, it is the content which draws the consumer to a particular website. The look or presentation is fairly unimportant while deciding which website to go to.
- Old media content is forced or 'pushed'. New media content is seeked or 'pulled' by the receiver. Newspapers, TV channels and radio stations find out different ways to attract consumers to pass on any information or message. They do so even if the consumer is not ready for it or hasn't asked for it. New media,



Players : Producer or service providers

however, provides the consumer the choice to ask for whatever information he or she requires. New media vehicles will not impose the information; rather, wait for the consumer to seek out the information on their own.

- In new media new concepts have emerged like blogs, wikipedias wherein targeted receivers of the messages and contents can themselves become both the receivers as well as contributors of contents. A sort of democratization process has been set in motion in this regard. But this is very limited in case of the conventional media.
- Web newspapers, internet editions of newspapers, magazines, video journals, magazines etc. have to advertise in a big way to make themselves visible to the intended target audiences which is not the case with the conventional print media like newspapers, magazines. However, as penetration of the computerized environment is increasing by leaps and bounds every passing moment the conventional media have been compelled to keep up with it. That is why all the foresighted conventional media organizations are increasingly making their contents available in their web versions – internet radio, internet TV, receiving TV / Radio signals, news updates on your mobile phones etc.



LET US KNOW

1. Lev Manovich describes new media as new cultural forms which are native to computers or rely on computers for distribution.
2. Manovich calls it a cultural form because new media vehicles have now become a part of new age culture. We can no longer function without a mobile phone or a computer. The extensive use of digital technologies has given us a new way of leading our day-to-day lives. Our verbal and written languages have changed dramatically with the advent of 'SMS lingo'. The Internet

has opened up the whole world before us. Web sites, human-computer interface, virtual worlds, multimedia, computer games, computer animation, special effects in cinema and net films and interactive computer installations have now become a part of our life and culture.

3. Bolter and Grusin define new media in terms of remediation: "We call the representation of one medium in another remediation and we will argue that remediation is the defining characteristic of the new digital media."

   The basis of their definition lies in the fact that 'new media' is nothing but 'old media' served in a new way. Bolter and Grusin believe that the conventional forms (newspapers, magazines, radio) of media have been refashioned and remodeled with the help of computers to create, what we now know as, new media.

4. Rice defined new media as "communication technologies that enable or facilitate user-to-user interactivity and interactivity between user and information."

   New media enables a two-way communication process much like interpersonal communication. You can receive messages and also reply or respond to those messages via new media. This establishes the user-to-user interactivity. Apart from this, new media also enables you to add to that bit of information that you wish to share with another user. With appropriate technologies, you can now make your own video or audio messages by adding images, music or text. So, new media also establishes interactivity between user and information.



CHECK YOUR PROGRESS

Q.1: Define 'new media'.

Q.2: Match the following:

a) Interactivity	a) old media	☐
b) Newspapers	b) can be surfed through the internet	☐
c) New media	c) new media as a new cultural form	☐
d) Online newspapers	d) is digital media	☐
e) Manovich describes	e) helps in attaining feed back	☐

1.4 CHARACTERSITICS OF NEW MEDIA

Some of the defining characteristics of new media are:

- New media's most vital feature is its digitality. It is often known as 'digital media' or 'digital new media', which simply means 'media that uses computers'.
- The second important characteristic of new media is its interactivity. It allows two-way communication between the sender and the receiver. You are no longer a passive recipient of information as you can now give your own input and comments via new media technologies.
- New media has the advantages of both interpersonal communication and mass media communication. It assists you in delivering individualised messages to infinite number of people at the same time. And every person involved in this communication process can reciprocate individually to the message.
- New media is space binding and time binding. You can attain information from any part of the world. Distance makes little difference in the time, cost or speed of getting information.
- New media content cannot be stored for too long. Your books can last a lifetime but information on floppy drives or CDs hardly last a few years.
- New media content is not forced on the audience unlike conventional media content which is 'pushed' by the media organization. New media



Telnet: It is a system that allows you to execute commands on another computer to which you do not have physical access. You need to know the name of the machine to which you want to connect, and to have a valid user name in it.

Gopher: It is a menu-based facility that provides information about the Internet. Although it was very popular a few years ago, its usage has decreased a lot after the introduction of WWW.

MIT: Massachusetts Institute of Technology. It is a private research university located in Cambridge, Massachusetts, United States.

PDP-1: The world's first commercial interactive computer. PDP stands for **P**rogrammed **D**ata **P**rocessor. It was the first computer where history's first computerised video game, Steve Russell's Spacewar, was played.

content is 'pulled' by the consumer. It is only when you want some information that you take the help of the Internet or other computational technologies.

- Hypertextuality is another feature of new media. Hypertext provides a link between different documents. You can move from one piece of information to another because of the hypertext links between the pages that contain the information.

1.5 MOST COMMON VEHICLES OF NEW MEDIA

Let us now learn about the most common vehicles of new media.

- **Internet and the World Wide Web**

  Internet is a network of networks, linking computers to other computers; it's a global network of computers. Your computer can attain any information stored in another computer through the Internet. The Internet provides for various services like e-mail, file transferring, **Telnet**, **Gopher** and the World Wide Web. The World Wide Web is often thought to be synonymous to Internet but it is not. You will learn more about Internet and the World Wide Web in the next unit.

- **Computer games**

  Computer games are the games played on a personal computer rather than a gaming console or an arcade machine. The first computer game, Spacewar, was developed in 1961 by **MIT** students on a **PDP-1** computer used for statistical calculations. Initially the games were basically text adventures or interactive fiction where the players had to enter commands through the keyboard. Computers were earlier used only for research or educational purposes. But with the advent of computer games, computers became more attractive to consumers and their popularity gave way to an increasing use of computational technologies by common people.

- **DVDs and CD Roms:**

  The DVD or the Digital Video Disc functions as a video and data storage device. The purpose of a CD or a Compact Disc is also the same but their storage capacities are different. A DVD can store six times more data than a CD. DVDs and CDs are the most common forms of storing

data files in today's world. Information sharing and spreading has become much easier and less cumbersome with the invention of CDs and DVDs.



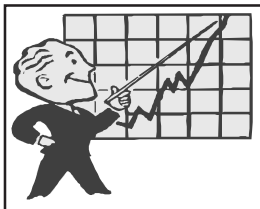
Image sensor: A device that converts an optical image to an electric signal.

- **Digital cameras:**

  Digital cameras take still and video images through an electronic **image sensor**. The first true digital camera was the Fuji DS-IP, which recorded images as a computerized file in 1988 but it was two years later that the first commercially available digital camera was launched. It was the Dycam Model 1. Digicams are a common mode of new media technology because they help in taking, storing and transferring images and video without much fuss. There is no need for developing negatives and waiting for hours to see a particular image as was the case with the original analog cameras. Images can be transferred to a computer and passed on to other computers as well.

- **Mobile Phones**

  These, as we all know, are long-range electronic devices used for voice communication. Mobile or wireless phones only work over a particular network area with specialized base stations that help in the communication. Several scientists have toiled over the last century to create what we now call the mobile phone, but the first practical mobile phone is credited to a Motorola researcher, Martin Cooper. He made the first call on April 3, 1973, to a rival from the Bell Labs. The advancement of technology has made mobile phones the most common vehicle of new media. They help in verbal communication, sending text and picture messages, taking pictures, browsing the Internet, listening to music as well as playing games. They are the perfect combination of all forms of new media technologies.



CHECK YOUR PROGRESS - B

1) Explain in brief the following terms:

a) Hypertext

_____

_____

b) Digital media

c) Two-way communication

d) Media push and consumer pull

Q.3: What are the advantages of New Media?

Q.4: What is the one major drawback of new media?



1.6 LET US SUM UP

1. New Media is the new form of communication which uses computational technologies to share or spread information
2. It is called new media because it differs from conventional or old media forms like newspapers, radio etc.
3. The basic difference between old media and new media is that the latter offers interactivity. New Media allows the recipient to be active in the communication process, as he or she can revert back to the sender.

4. Another factor that distinguishes new media from old media is that new media is accessible and has a wider reach.
5. Conventional media forms now employ new media technologies to reach more audience.
6. New media has the positive aspects of both interpersonal communication and mass media communication. You can reach out to the masses with individualised messages. And through new media, every individual in that mass of people can get back to you with their feedback.
7. New media helps to attain information from every nook and corner of the world.
8. One major drawback of new media is that the data attained cannot be stored for too long. CDs, DVDs, hard drives etc have a short life span.
9. New media technologies provide you with information only when you ask for it. The consumer has to 'pull' information unlike other media in which the media organization has to 'push' their information to the audience.
10. The most common vehicles of new media are the Internet, CDs, DVDs, digital cameras and mobile phones.



1.7 FURTHER READING

1. **New Media: A critical Introduction** – *Martin Lister, Jon Dovey, Seth Giddings, Iain Grant, Keran Kelly (Routledge).*
2. **Digital Media, Building the Global Audience** – *TK Ganesh (Gnosis Publishers, New Delhi).*



1.8 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q. No.1: The new form of communication which uses computers or digital technology to spread information can be termed as new

media. It is termed new media in relation to old media like newspapers and radio etc. New media is interactive thereby allowing two-way communication, it is digital and it has a wider reach.

2) Match the following:

a) Interactivity	e) helps in attaining feed back
b) Newspapers	a) old media
c) New media	d) is digital media
d) Online newspapers	b) can be surfed through the internet
e) Lev Manovich describes	c) new media as a new cultural form

Ans. to Q. No.2: In brief:

a) Hypertext: Hypertext is the link between different pages of data on a computer. It has been made famous by the World Wide Web. When large chunks of information cannot be placed in one page the information is segmented into different web pages and with the help of hypertext you can go from one page to the other by the click of a mouse.

b) Digital media: It refers to electronic media which works on digital codes. Digital refers to the binary numbers '0' and '1' and computers rely on these two binary numbers to interpret and represent data. New media technologies are essentially 'digital' because they rely on computational technologies.

c) Two-way communication: The communication process which involves both the sender and the receiver is called a two-way communication. The recipient is also active as he gives back his feedback to the sender. It is a to and fro mode of communication much like when you are talking to a friend. New media allows two-way communication and that is why it is also called interactive.

d) Media push and consumer pull: When any information is given to the consumer without his asking for it, it is called media 'push'. And when we, the consumers, seek information through media outlets, it is referred to as the consumer 'pull'. For instance, television commercials provide information about several products,

which the consumer may not even be interested in. That's media push. But when the consumer is trying to find out about a particular product on the Internet, he is 'pulling' information. It is, therefore, called consumer 'pull'.

Ans. to Q. No.3: The new media technologies have several advantages. As new media supports interactivity, it gives you the benefits of interpersonal communication. At the same time, new media helps you reach out to the mass, it thereby employs the advantages of mass media communication. Moreover, new media helps speed up the communication process. It also assists in attaining information from any part of the world.

Ans. to Q. No.4: The major drawback of new media technologies is that the data created or accumulated via its various vehicles does not last long. Computer files, CDs, floppies, DVDs etc, get corrupted and important data is lost.



1.9 POSSIBLE QUESTIONS

Q.1: How can you differentiate new media from conventional media?

Q.2: Interactivity is a major advantage of new media. Explain.

Q.3: New media is a combination of mass media communication and interpersonal communication. Explain.

Q.4: Explain the relevance of content and presentation in terms of both new and old media.

Q.5: New media vehicles have given rise to a new media culture. Elucidate.

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UNIT-2: IMPACT OF NEW MEDIA

UNIT STRUCTURE

2.1 Learning Objectives

2.2 Introduction

2.3 Impact of new media

- 2.3.1 Society and mass culture
- 2.3.2 Politics and developmental issues

2.4 New media and journalism

- 2.4.1 Print journalism
- 2.4.2 Broadcast journalism
- 2.4.3 Advertising industry

2.5 Convergence

- 2.5.1 Media convergence
- 2.5.2 Advantages of media convergence
- 2.5.3 Rising concerns about media convergence

2.6 Let us sum up

2.7 Further reading

2.8 Answers to check your progress

2.9 Possible questions

2.1 LEARNING OBJECTIVES

After going through this unit you will be able to :

- Explain the impact of new media on the society and mass culture,
- Describe its impact on political and developmental issues,
- Narrate the effects of new media on the media industry,
- Define media convergence,
- Elucidate the characteristics of convergence,
- Identify the advantages and limitations of convergence.

2.2 INTRODUCTION

By now, you must know what new media means. The concept of new media has been discussed in detail in the first unit. In short, new media

involves computing, two-way communication and is interactive. In the first unit we also touched upon the fact that new media has had a major impact on all spheres of our life. Computers and other technologies have made deep inroads into our daily lives, so much so that we cannot imagine a life without them anymore.

In this unit, we will discuss the implications of new media in our life. We will also discuss it's impact on society, mass culture, politics, developmental programmes and the media industry as well. This unit will also focus on the understanding of convergence and how it has contributed to the whole scenario of communication.

2.3 IMPACT OF NEW MEDIA

The impact of new media has been pretty colossal and far reaching. With the advancement of technology, information has become an easily accessible commodity. The spread of any kind of information or news is faster and easier. Computers, Internet, mobile phones, videogames, iPods etc, have changed the way we live and their impact on every aspect of our lives is phenomenal.

They have taken such a strong footing in our lives that we cannot think of a life without any of them. In such a scenario, it is no wonder that all these new media technologies have made a great impact on our society and culture as well. They have very cautiously merged into the modern mass culture and become an intrinsic part of our social existence. These technologies have also had a major impact, both positive and negative, on all other major spheres like developmental activities and political issues.

In the next few sub-sections we will discuss how new media technologies have made an impact on these aspects of our life.

2.3.1 IMPACT ON SOCIETY AND CULTURE

Now-a-days, we live in an inter-connected world, a global society which facilitates interaction and communication. This in turn encourages cultural realignments and transformations. The world that we live in today is epitomized by globalization as well as the

advancement of technologies. Our world has become smaller as technology has brought us closer. In such an ever-changing media scenario, our socialisation process, our values and our beliefs are shaping up accordingly. It has even influenced our decisions regarding educational choices, employment, leisure and life in general.

The new media technologies provide a culture of information and pleasure, and independence to make decisions. All these appeal to the modern day youth, and it has its own implications on not just them, but their relationships within the family and society as well. Globalisation has provided the youth with experiences which are global and local at the same time. Youngsters fiddling with their cell phones, or their computers or game consoles are a common sight nowadays. But these technologies are not just a means of passing time. Some academics believe that technology is at the cultural core of today's young generation. The youth stays connected from home, school, workplaces and even from local cafes because they want to be connected and they need to play a participatory role in today's world. These day-to-day activities which involve new media technologies have shaped the society and times of today.

We all know that nowadays it is the age of information across the world. These days the advancement or development of a nation or a society is measured by the extent of access a citizen has to different types of information. That is why new media plays a vital role in providing easy access to the masses on a scale which was unthinkable about two decades back. It has in a way revolutionized the information dissemination activity all over the world.

Being students of Mass Communication you already very well realize the immense importance of information for masses in every aspect of life. It is not only enough that good quality information is developed for our use. If we can't let the masses utilize this mass of information it will be a sheer wastage, nothing else.

This is because 'information is power.' So, in addition to mass media, new media is an excellent way for disseminating any kind of information to the masses through its various media.

2.3.2 IMPACT ON POLITICS AND DEVELOPMENTAL ISSUES

New media technologies are now a part of every aspect of our lives, be it in our day-to-day work, in our relationships with friends and family, and in our contact with the world in general. Politics and developmental issues are not far behind either.

Today's political scenario cannot do without new media telecommunications, computers, Internet, electronic media etc. These technologies help sustain democracy because it involves the people in the political affairs. New media is interactive and it is through new media that the political parties or public figures can receive feedback from the public. The cell phones, the World Wide Web and the various other new media organs have made the political system more transparent. Politicians now have to be more careful about their work as the public has become more vigilant and aware about issues. Information spreads like wildfire and it takes no time for that to happen. The public is more aware and more careful about their political choices.

Apart from the public, new media also assists politicians in propagating their ideas through them. Propagation of ideologies is the most important objective for every politician. Earlier, the only means of reaching out to the public was through rallies, and through traditional media outlets like newspapers, radio etc. But now even political parties have realized the importance of targeting the public through new media vehicles. Especially the young generation, who are the most difficult to access, can be targeted through the Internet and other means.

The 2009 parliamentary elections in India were not just fought through the rallies or the speeches. Every party had their own

websites and their own new media strategies to lure the voters. Rahul Gandhi's campaign was followed by lakhs of people on the social networking site Twitter. Even during the American presidential elections of 2008, Barack Obama was very active on the World Wide Web. In fact it is said that new media including internet can claim a considerable credit in the entire campaign of the last US Presidential elections.

Unlike the widespread use of new media in the political scenario, the developmental sector is yet to see much of it. Although new media, especially Internet, can be used extensively in rural and agricultural development, its use has been seldom in the Indian subcontinent.

Internet is basically a medium of communication and better communication strengthens the development procedure. In India major development schemes do not reach the intended beneficiaries because of lack of awareness. People in the rural areas have no information about any of the government initiatives. Communication gap between the haves and the have-nots is the main reason behind the failure of most development projects. In such a scenario, new media can be used to bridge the gap.

However, the government has been taking up some active efforts for promoting better governance through the internet and new media mode. This includes internet terminals at almost every two or three villages of the country so that the local people can take advantage of the accessibility to information they may need on any issue of the world. This is going to take some considerable time to become practical but at least a beginning has been made in the right direction.

New media technologies can be used to develop locally appropriate applications and creative services. It can provide knowledge about successful development activities, improve the access to a variety of information like training, research and educational resources which are generally not available in rural areas

due to costs associated with printed materials and books. Access to new media technology can bring critical technical information to rural professionals like doctors, engineers, health care workers etc. This can further encourage professionals to continue working in the villages.

Internet can also be used as marketing tools to promote rural tourism and market home based businesses and other rural products. It can even enable local NGOs to interact with global organisations and seek necessary funds. They can also sensitise the policy makers to the ground level realities and needs of the rural population. But, the fact remains that new media can be used in every sector and it can only bring in positive results. It only remains to be seen how deep-rooted this impact can be in the coming decades.



CHECK YOUR PROGRESS

Q.1: What is the impact of new media on modern day society?

Q.2: How can new media technologies be used for social development?

Q.3: Write True or False:

a) Politicians have now become technology savvy. (T/F)

b) Youngsters are the least affected by new technologies. (T/F)

c) New media technologies are of no use as far as rural development is concerned. (T/F)

d) Technology has shaped the culture and times of today. (T/F)

e) New technologies have improved our living conditions. (T/F)

2.4 NEW MEDIA AND JOURNALISM

You have already seen that new media has an immense impact on the world around us. Our society, our culture, our politics have all been effected by the technologies. And with time, this new media penetration will be even deeper and will reach a much wider section of people.

New media, however, was developed mostly as a means to communicate and to spread information. So, it's not surprising that its impact on journalism is much more than anywhere else. Be it print, radio or broadcast, new media technologies have brought in sweeping changes in their domains. The Internet and the World Wide Web have changed the way journalists work. In the previous unit, you had read about online journalism which has become a totally new sector. But other than that, even the regular journalistic factions have received a boost with the coming of new media technologies. In the coming sub – sections, we will discuss how new media technologies have influenced the major journalistic sectors.

2.4.1 PRINT JOURNALISM

Not many moons ago, journalists functioned in information poor societies but new technologies have created information rich societies which demand much more from journalists. New technologies have improved news gathering practices which in turn have increased the expectation of quality news coverage. Journalists, therefore, are expected to become more creative in the way they deliver the news.

Now-a-days, journalists need to be multi skilled. The digital age of printing expects reporters to participate in much more technical functions than they ever did before. It is absolutely essential that

reporters are familiar with the Internet, other common computer programs as well as the different editing and pagemaking software. **Computer Assisted Reporting or CAR** has fast become a journalist's preferred method of researching stories.

Photojournalism has also been highly influenced by new media technologies. Digital cameras with various features now assist photographers in capturing images of better quality and in much lesser time. It doesn't even take time to use the pictures for publishing unlike earlier when the camera reel had to be developed overnight. Nowadays, photographers can give breaking news stories with the help of their lenses. The images of a woman being molested by a group of men during New Year night revelries in Mumbai a year or so back became main story news for newspapers. And the photographers who took those pictures were awarded for their news sense.

But sometimes, photographs can be doctored to assist the motives of the news. With the help of software like Adobe Photoshop, images can be digitally manipulated to implicate a certain belief. For instance, in the 1994 OJ Simpson trail for murdering his wife both **Times** and **Newsweek** carried cover stories but the images differed. Newsweek later admitted that they had darkened the face of the alleged culprit to make him look evil.



Times is the largest metropolitan daily newspaper in the United States while **Newsweek** is the second largest news weekly magazine in the country.

New media, some say, has affected print journalism to such an extent that print journalists have now become an endangered species. So many new editing softwares have hit the market that a reporter's job nowadays is almost insignificant. Word processing, spell check, grammar check and style check are some of the simplest attributes of editing software. Besides these, there are also some news writing software available. The SportsWriter is one such software, created by Robert Helms, which can spin sports stories out of match scores and details. There are also several packages which can sort out news, summarise the news coming from news agencies, newspapers and magazines.

With the gradual onset of new media technologies into the realm of journalism, there was a fear that print journalism would soon be a dying proposition. But despite the growing concerns, it has been seen that newspapers and magazines are still a favoured medium among readers. Although the Internet and the World Wide Web and the other technologies have trespassed into print media's domain, it has only pushed the latter to scale new heights. No doubt journalists have had to get acclimatized with new technologies and get used to its idiosyncrasies, it has been a great help to their work. The new technologies have made a journalist's job easier and faster. New technologies have only made the process of news gathering a less cumbersome job. The various editing software however only assists a reporter in his or her job. A writer still has to write well to be called a journalist. The new technologies will only assist in his research work and not in writing the actual draft.

We can very well say that rather than becoming a threat to print journalism, a fine knowledge of the new media and its various aspects will even help the print journalist in presenting his or her stories in a better way.

Print media may not appear the way it used to earlier but it is incorrect to say that it is a dying media. It can only grow bigger and stronger if it assimilates new media technologies into its domain.

It is interesting to note that in the face of the emergence of the new media, print media has also braced itself up for taking on the challenge and is collaborating more and more with the new media, particularly the internet or world wide web for reaching out to far more readers / audiences complementing each other on the way. Today, any newspaper or magazine has to have at least some links with the new media for a better survival.

2.4.2 BROADCAST JOURNALISM

As far as broadcast journalism goes, it wouldn't be wrong to say that technology is the basis of it. But advancements in media

technologies in the recent years have only added to the meteoric rise and spread of electronic news channels. Digital advancements have proved effective in terms of immediacy of news and interactivity between news producers and viewers.

Nowadays, news journalists can broadcast live news from anywhere in the world. They can send images and video footage directly to newsrooms via video phones. It allows comprehensive coverage of breaking news. Many such technologies also help journalists to edit audio and video footage on location with the use of wireless laptops and they can transmit the footage to the newsroom through the Internet.

War journalism has received a huge impetus due to technological advancements. It has changed the way war correspondents report from international conflict zones. There has been a distinct change in the way the Vietnam war was televised and the real time coverage of the Iraq war of 2003. Video phones and laptops have made war reporting easier and a very common practice. There has also been significant development in portable satellite technologies which have brought about drastic changes in newsrooms worldwide. Media organisations can now easily distribute resources like audio-video footage and stories within newsrooms and across various networks of newsrooms.

You must already be familiar with the concept of internet TV / Radio by which one can watch TV programmes or listen to Radio programmes by tuning into the internet. This is one major achievement of new media in the world of communication.

A reporter can send in his report as a spoken message or a text using the internet connection through his mobile phone itself. This is also helping a lot in preparing a coordinated presentation of news reports.

2.4.3 ADVERTISING INDUSTRY

The advertising sector has also undergone quiet a few changes with the onslaught of new technologies. Technologies have influenced the process of ad making, the dissemination of ads and the choice of medium for the ads. Technology now offers all kinds of typeface designs which allow models to be shot indoors and placed in exotic locales. The body and face of models can be altered to make them look perfect.

Technology has also helped the advertising industry in gaining access to consumer information. The advertisers now know what the consumer needs are, and based on that, they customise their ads towards specific audiences. Regular web surfers can interact with ads in greater depth and can benefit largely from the personalized messages. Most companies now send e-mails to promote their products. The delivery of message has been made easier. Companies can now focus on individuals who would be interested in their product rather than sending junk mails to all and sundry. Rather than invading an individual's space, companies can send information which is valuable to him or her.

Those of you who have been surfing the internet must be aware of the numerous advertising messages flooding your e mail address and the various websites in the internet.



CHECK YOUR PROGRESS

Q.4: What do you mean by Computer Assisted Reporting?

Q.5: Name a software which can spin sports stories out of match scores and details.



ACTIVITY - A

1. Visit a TV station in your area and check out the various technologies they use in producing their programmes. Check out their cameras, their editing software etc.
2. Talk to a newspaper journalist and find out how technology savvy they are. Do they still resort to old methods of journalism or have they incorporated new technologies in their work?
3. Try to use Adobe Photoshop software on a computer and see for yourself how images can be retouched.

2.5 CONVERGENCE

It is said that the 1980s was the decade of the computers and the '90s was the decade of the Internet. And what started after that is called the decade of convergence or what can simply be called the converging of technologies. In simple parlance, Convergence means the merging of different technologies in a single platform.

It can also be called an interconnection of information, thoughts and ideas across geographical boundaries. It believes in establishing a world where people are not denied access to any ideas or visions. Whether or not you think in terms of technology or information or people, the truth is that convergence is tearing down the barriers of society, industry and institutions of all sorts. For some advocates of convergence, the final product will be an enormous interconnection of digital technologies. The connection can be wire or wireless, voice or data, space or terrestrial. But the aim is to make all technologies, right from the kitchen toaster to the computer server to connect with speed, accuracy and purpose.

Convergence of technology takes place at different levels – in consumer products, in gadgets and in communications. Now-a-days, most

consumer products merge two different technologies to create a new technology. For instance, we now have talking refrigerators and washing machines. They not only make your daily chores easy but also tell you how to go about using the machine. Nowadays, digital cameras can not just take pictures but they can also add colour, text, graphics and sometimes even music to the images captured.

Being media students, however, you need to understand the concept of convergence in the media industry. You need to know how the convergence of communication technologies has influenced the media industry and our lives. In the next unit, the concept of media convergence is discussed in detail.

2.5.1 MEDIA CONVERGENCE

Not many years ago, the different media forms like print, broadcast and telephones were separate entities. But with the coming of new media, all these different forms have been merged to create what we now call 'Media Convergence'. Technological advancements in the field of computers and telecommunication networks has led to the merging of the traditional media forms with computer-based new media, thus giving rise to media convergence. Computers, cameras, Internet applications etc. were all individual entities, but with convergence, all these entities are now merged. Nowadays almost every cell phone has a camera installed in it, it can also help you browse the Internet and you can even make presentations or write reports on it. And all this is possible because of convergent technologies.

The impact of convergence in the print media sector can be perceived by the steady rise of online newspapers. All major newspapers in the world today have their online versions, and that is possible only through convergence of new media technologies with print media. Online newspapers have turned out to be revolutionary because they are updated round the clock with information from all over the globe. Online newspapers also promote interactivity and maximum archival capacity.

Convergence of new media technologies with television has led to concepts like Internet television which allows consumers to watch TV through the Internet. Even concepts like Tata Sky and Dish TV are examples of media convergence where you can select your own favourite programmes from a drop down menu, you can play games on your TV, you can record live programmes, etc. Thus, the advancement of technologies has opened the doors for more futuristic television.

As a result, simply using a TV card or radio card one can watch TV programmes or listen to Radio programmes in the computer itself. The direct-to-home antenna and the cable TV connections can provide you with internet access, Radio or TV programmes and what not.

Convergence of telephones and other communication media is the most widespread. Mobile phones can now be used to access the Internet, play games, listen to music, take pictures etc. Internet telephony is another concept which has become very popular of late. This enables users to make international calls through the Internet with minimum ISD charges. There are several websites which offer this service, for instance, *Phonewala.com*.

2.5.2 ADVANTAGES OF MEDIA CONVERGENCE

Media convergence is a concept that most people may not know about, but the benefits of which are being reaped by almost everyone. Online newspapers, Internet television, multimedia cell phones are all results of media convergence, and they help us communicate better and in a more effective manner. Its advantages are manifold. Some of them are discussed below:

1. Convergence of communication technologies help make life easier and simpler. We can now do so many things on a single gadget. A cell phone can double up as a telephone and a camera. You no longer need to carry a camera along everywhere because mobile phone cameras are equally good in quality.

2. Major newspapers of the world have online editions. So wherever you are, you don't need to worry about missing out on your local news. You can check out your favourite newspaper through the Internet. You save on the money too.
3. Many communication technologies are converging into digital forms which improve the quality of the end product.
4. Even books can be read online nowadays. This allows you to read books which you otherwise might not have access to.
5. Personal computers have CD and DVD drives, so you can watch movies and listen to music on your PC.
6. The convergence of technologies has turned out to be a boon for corporate honchos. They can conduct their business through their mobile phone. They can make calls, email important documents, make presentations, etc. on their phone itself.
7. Video conferencing is another facet of media convergence which helps people to communicate better. You can see the person you're talking to even if he or she is many miles away from where you are. Most computers nowadays have webcams which allow the user to see the person he or she is chatting to, through the Internet.
8. SMS, MMS, Bluetooth, are technologies which assist in sending information or data faster. Now, most cell phones and personal computers have incorporated these technologies into their own, thus allowing the user to do much more with a single gadget.
9. One major obvious advantage which is distinct from all these others is the immense possibility of sending and receiving data including photographs whenever one wishes any time of the day or night in a matter of a few seconds. This saves us so much time that we can only imagine about it. At a simple level, if a student or person has to send and application somewhere he or she can just download it from the internet, fill it up and simply send it online in a few seconds. The same form if somebody wants to get through the post office or courier it will be several days.

10. Another very important advantage is that despite the advent of so many avenues of information dissemination, with emergence of new media it is also becoming quite difficult to cheat people. Let me cite an example here. During the large-scale bombing of Palestine by Israel about a year or two ago, a photograph of a bombing incident was published in major newspapers by Reuters – the reputed international news agency. After about three days a few blogs started spreading a message that this particular photograph in question was a fake one, not a real one. Reuters immediately enquired with their freelance reporter in Palestine who then admitted that almost 30 % of the photograph was actually 'doctored' – contents changed with the help of computer graphics software. The photograph was recalled with an apology and the person's contract was terminated. We can cite several such instances. If somebody wants to cheat others, there is a lot of possibility that it will be found out sometime or the other.

The basic advantage of media convergence is that it has made our day-to-day lives easier and has reduced our workload to a large extent. But media convergence is not just about good things. Academics and scholars have raised several concerns about convergence. These will be discussed in the following section.

2.5.3 RISING CONCERNS ABOUT MEDIA CONVERGENCE

The concerns about convergence are many. Some of them are discussed below:

1. Convergence of technologies has definitely made life easier for people but in the process it has also made us lazy. We have become so accustomed to the gadgets that we tend to depend on them for everything.
2. It has given us several new ways to communicate and keep in touch with our friends and family. But we have lost the personal touch. We prefer to talk over the phone or SMS rather than meet up.

3. For those interested in making a career in the information society, convergence will make jobs and careers highly volatile. With the continuous advancement of technology, companies will try to re-engineer themselves time and again. So, a student interested in journalism, radio or TV will have to keep updating their knowledge and skills because old career tracks will disappear and new tracks will keep emerging.
4. Most jobs, like that of broadcast technicians, typesetters, telephone operators might shrink owing to improvement in information systems and automation. Simply a computer and a scanner can do enough work to eliminate most of the media jobs.
5. Cyber addiction is a major concern. Youngsters are so hooked to the computers because they can now do so many things on the PC. They can chat with friends, watch movies, play games and listen to music. So much so that they are addicted to these machines, having lost touch with the outside world.



CHECK YOUR PROGRESS

Q.6: What is convergence?

Q.7: Name some common gadgets or products which have employed convergent technologies.

Q.8: How has technology influenced the advertising industry?



2.6 LET US SUM UP

1. New media has had a massive impact on our modern-day life.
2. Technologies have assisted in information becoming easily accessible, news spreading faster, and it being immediate.
3. New technologies have re-engineered the society that we live in. They have become so much a part of our life that they have assimilated into our culture.
4. Because of the changing media scenario, our values and beliefs are shaping up accordingly, influencing our decisions regarding all our choices.
5. Technology is not just a pass-time for the youth. It is at the cultural core of the young generation.
6. Technology has seeped in so deep that even SMS language has now become an important part of our verbal and written communication.
7. New media technologies have also influenced our political systems. They sustain democracy because they involve the public. Even politicians have understood the benefits of new media technologies. They are using the Internet to reach out to the people.
8. The Internet has made the public more aware and knowledgeable. It has made the demand for more transparency in the political scenario.
9. The World Wide Web has become the new battle ground for politicians to propagate their ideas and also to get direct feedback from the public.
10. The need to inculcate new media technologies in the development sector is largely felt in India.
11. Even though such technologies have made inroads into this sphere, it is not as deep as in the other aspects.
12. Rural and agricultural development will be highly benefited if new media technologies can be employed.

13. New media technologies assist in communication and most developmental schemes do not reach the intended beneficiaries because of lack of information about them. In such a scenario, if rural people have access to such technologies like the Internet and cell phones, they will be informed about all the schemes.
14. If new media technologies are available in the rural areas, it can attract skilled professionals to work there.
15. These technologies can also be used to promote rural tourism and the unique products made there.
16. The media industry has also been highly influenced by the advancement of new technologies.
17. News gathering techniques are different and journalists now need to do much more. They need to be multi-skilled.
18. The digitalization of most work expects journalists to be more techno savvy. They need to know how to work on a computer and how to use the necessary software.
19. While the different editing and news writing software has made the job of reporters easier, it has also put a question mark on their editorial capabilities.
20. Even photojournalism has been affected. New and improved cameras help photographers to take more high quality pictures. They can even send these pictures to the editorial bench much faster than they could earlier. But with technology, most photographers and editorial boards have also lost the way, as they tend to doctor the images to prove their point.
21. Broadcast journalism has also improved by many notches with the advancement of technology. TV journalists can now send news feeds from anywhere in the world. They can also transmit live news from location. War reporting, sports reporting etc have all become much better than before.
22. New technologies have also had an impact on the advertising industry. Ads are now made keeping in mind the target audience. Technology

has helped companies in identifying their core audience, and they can thereby target their ads at only those people.

23. Convergence is an offshoot of the advancement of new technologies. Convergence takes place when two technologies merge on a single platform.
24. Nowadays, most electronic gadgets and devices employ convergent technologies. Every device can be used for more than one purpose. A cell phone doubles up as a camera, a computer doubles up as movie screen, the Internet doubles up as a telephone etc. In all these cases, two technologies have been merged on one platform.
25. Convergence in the media sector is called media convergence. When traditional media vehicles merged with new media vehicles like computers and Internet, it became media convergence.
26. Now-a-days most media vehicles employ technology to improve quality and services. Newspapers have online editions, television has become interactive, and radio programmes use telecommunications to establish contact with the listeners.
27. Mobile phone is the most common tool to showcase convergence. They allow users to make calls, send text and video messages, access the Internet, make official documents, capture still and video images, record audio streams, listen to music, play games etc.
28. The benefits of convergence are one to many. The most vital is of course, the fact that it has made our lives easier. We can just keep one gadget to complete all our work.
29. All sorts of information spread faster and are more accurate. You can access any information you need from wherever you are at the moment.
30. Many cumbersome jobs have now become effortless.
31. Along with the benefits, convergence also has many anomalies. It has made people lazy, and has turned them into technology geeks.
32. People have become so dependent on their gizmos that they cannot see any other means to do their work.

33. Careers and jobs have been affected. If one is not multi-skilled in handling the technology, one might not survive in the ever-changing industry. Most jobs have been eaten by computers and other technologies as there is less need for man power.



2.7 FURTHER READINGS

1. **Digital Media, Building the Global Audience** – *T K Ganesh (Gnosis Publishers, New Delhi)*.
2. **Impact of Internet on Journalism** – *Arun Bhatia (Akansha Publishing House, New Delhi)*.
3. **Net, Media and Mass Communication** – *Jagadish Chakraborty (Authors Press, New Delhi)*.
4. **Electronic Journalism, Principles and Practices** – *Aditya Sengupta (Authors Press, New Delhi)*.



2.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q.No.1: New media has had a major impact on our everyday lives. It has penetrated deep into all our affairs so much so that we cannot think of life without these technologies. Imagine a life without cell phones, without television, without computers. Modern society is made up of people who are completely dependent on these various technologies. Our homes, our workplaces, our schools and colleges are all clued in to new media technologies. And it's not just in the cities or the urban areas. Every new technology may not be accessible in rural areas but the major ones are. Telecommunication networks have intruded deep into our villages, a television is a reality in almost every home. In fact, satellite TV is available in many small towns and villages. All these technologies bring the world closer; they inform the public about the happenings from all over the world. The world is now

a global village, and that is because of the spread of new media technologies.

Ans to Q.No.2: New media technologies can be used for social development in various ways. They can help in the process of communication between the government and the rural population. Through the Internet, the rural people can put across their grievances to the concerned authorities. NGOs working in the areas can communicate to the outside world and raise funds. Proper technologies can attract skilled professionals to work in villages. Rural tourism can be promoted through the Internet, and the indigenous products can also be marketed. They can get information about a better price for their products at a distant place than the local place, get a certificate downloaded and printed about land ownership or marriage registration, results of examinations, entrance tests etc. what not.

Ans to Q.No.3: a) True, b) False, c) False, d) True, e) True

Ans to Q.No.4: Computer Assisted Reporting or CAR means the use of computers in news-gathering. Journalists now regularly search for relevant information in the electronic realm, including government databases and online archives. From it, they derive ideas for stories, find contacts, get essential background information and check their facts in an electronic analogue of traditional legwork. They use software tools such as spreadsheets and data mining programs to search, collate and process data.

Ans to Q.No.5: SportsWriter

Ans to Q.No.6: Convergence is the merging of two technologies on a single platform. Most gadgets, these days, are based on convergent technologies. For instance, telecommunications technology merges with the technology of digital photography in a cell phone. Broadcast technology merges with computational technology to create Interactive TV.

Ans to Q.No.7: Some of the most common gadgets to employ convergent technology are mobile phones, computers, television sets, washing

machines, iPods etc. Mobile phones allow users to make calls, send text and video messages, access the Internet, make official documents, capture still and video images, record audio streams, listen to music, play games etc. Your personal computer can be used to watch movies and listen to music. Interactive TV permits you to choose your favourite programmes, play games on it, etc. Washing machines and refrigerators can now talk to you and tell you how to use them. You can use iPods to listen to songs, watch movies, listen to the radio, play games, store contact information etc.

Ans to Q.No.8: Just like every other media domain, technology has also influenced the advertising industry in all aspects. Ads are now created and distributed keeping in mind the target user. Internet technology has assisted the companies in identifying their potential customers. Therefore, they now make ads according to the requirement of those customers. Even the creative people who make these ads are using technology to create the desired product. They use high profile cameras and other digital software to get the best shot. Sometimes, technology helps them save money. A model can be clicked in an indoor location and later the background can be joined and she can be placed in an exotic locale.



2.9 POSSIBLE QUESTIONS

Q.1: New media's impact on modern day culture is not a healthy sign. Discuss.

Q.2: Discuss media convergence.

Q.3: The World Wide Web has become the new battleground for political parties. Discuss the statement in the context of national and international elections.

Q.4: How can journalists survive in this ever-changing world where technology is taking over most jobs done by humans?

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UNIT-3: COMPUTER REVOLUTION AND INTERNET

UNIT STRUCTURE

3.1 Learning Objectives

3.2 Introduction

3.3 Evolution of computers

3.4 What is Internet

- 3.4.1 History of Internet
- 3.4.2 How Internet came to India
- 3.4.3 Characteristics of Internet
- 3.4.4 Internet's contribution

3.5 Internet Services

- 3.5.1 E-mail
- 3.5.2 FTP (File Transfer Protocol)
- 3.5.3 Telnet
- 3.5.4 Gopher
- 3.5.5 World Wide Web

3.6 Let us sum up

3.7 Further reading

3.8 Answers to check your progress

3.9 Possible questions

3.1 LEARNING OBJECTIVES

After going through this unit you will be able to :

- Discuss how computers evolved over the years
- Explain what is Internet
- Discuss the history of the Internet
- Identify the characteristics and the contribution of the Internet
- Describe the various Internet services
- Explain what is World Wide Web

3.2 INTRODUCTION

In the first unit, you learnt about new media boom and how computers changed the whole concept of conventional media vehicles. You have understood that computers have changed the whole business of information sharing and spreading giving rise to a whole new concept called the new media. But to get a better understanding of how computers changed the face of communication you need to understand computers as well. This unit, therefore, will focus on what computers are and how computers evolved over the years.

This unit also focuses on the importance of the Internet because Internet is the most popular facet of the computers in today's world. You will get to know how the Internet was developed and what are its characteristics and contribution. The Internet services particularly the World Wide Web is also discussed in detail in this unit.

So, now let's get into understanding computers a little better by learning about its history in the very next section.

3.3 EVOLUTION OF COMPUTERS

The first computers were people. The term 'computer' was originally a job title conferred upon those people who used to make calculations necessary for deducing planetary positions, tide charts and navigational tables. Before the advent of the electronic or the mechanical computers human beings used to do all the required calculations for various sorts of jobs and human errors would lead to several problems. Therefore, inventors were always looking for ways to mechanise these cumbersome tasks.

Several inventions have since been made. The abacus, the logarithm tables, the Pascaline and the Difference Engine were some of the most popular forms of calculating machines. Even IBM started making mechanical calculators and selling it to business houses for financial accounting. But all these were still not good enough. The US Military wanted even higher-end calculators for their battleships and other armaments.

During the Second World War, the American battleships could throw shells weighing as much as a small car but all that needed perfect

calculations. And there would be people writing the necessary equations which would determine the gravity, the atmospheric drag, velocity etc and then make the necessary firing tables for the artilleries. During the war, the army went around looking for math major students to do the computing jobs. But because of the scarcity of qualified individuals, on several occasions the artilleries were sent to the battleground without the firing tables

Faced with such a situation, the US army was willing to accept even the most hair brained of ideas. One of the early successes was the Harvard Mark I computer, built by the IBM and Harvard in 1944. It was the first programmable digital computer in America but it was not a purely electronic computer. Colossus is another precursor to the modern day computer. It was built by Britain during World War II and it helped in breaking several German radio transmission codes.

There were arguments among the Americans and the British over who was the first to do what. But after the works of **Konrad Zuse** were published in 1964 all such debates were put to rest. Zuse had built a series of general purpose computers in Nazi Germany and the first one in the series, Z1, was built way back in 1936. His third machine, Z3, built in 1941, was perhaps the first software controlled digital computer. All his first three machines were destroyed in the Allied bombings and Zuse could only save the Z4. Because his machines were not known outside Germany, they did not effect the computing evolution in America. But their structure is surely similar to the computers of today.

Despite, Zuse's attempt, the **ENIAC** is popularly considered to be the forefather of today's digital computer. After ENIAC came other computers with funny names, viz. EDVAC, ILLIAC, JOHNNIAC and MANIAC.

By the end of 1950s, the makers of the ENIAC, Eckert and Mauchly, started their own business and built UNIVAC, the first commercial computer. But the two never achieved much fame and their business didn't take off and by the 1960s IBM was selling more computers than all the other companies in the race. IBM's downfall came when a smaller firm, Microsoft, became a software giant. Ironically, it was IBM which had hired Microsoft to provide the software for their computers.



Konrad Zuse: He was a German civil engineer and computer pioneer.

ENIAC stands for Electronic Numerical Integrator and Calculator. It was built at the University of Pennsylvania between 1943 and 1945 by John Mauchly and J. Presper Eckert who got funding from the war department.

The history of the computers is a fascinating tale and this section has given you an exhaustive account of how the present day computer came into being.



LET US KNOW

Harvard Mark I was made of switches, relays, rotating shafts, and clutches. The machine weighed 5 tons, incorporated 500 miles of wire, was 8 feet tall and 51 feet long, and had a 50 ft rotating shaft running its length, turned by a 5 horsepower electric motor. The Mark I ran non-stop for 15 years, sounding like a roomful of ladies knitting.



CHECK YOUR PROGRESS

Q.1: Why were people called computers?

Q.2: Why did the American army need computers?

Q.3: Identify whether the following statements are True or False:

a. Konrad Zuse's computers were all destroyed during the 2nd World War. (T/F)

b. COGNIAC is the name of a computer. (T/F)

c. Computers have developed mainly because of the Americans. (T/F)

d. Z3 was the first software controlled digital computer. (T/F)

e. UNIVAC is the same as ENIAC. (T/F)

f. Microsoft was founded by Bill Gates and Paul Allen. (T/F)

g. John Mauchly and J. Presper Eckert were successful businessmen. (T/F)

h. Colossus was a Japanese invention. (T/F)

3.4 INTERNET

You read about the Internet in the first unit but that was a just a tip of the iceberg. For New Media students the knowledge about the Internet is of supreme importance. It wouldn't be wrong to say that today's world runs because of the Internet and the various Internet services. In this section you will learn what the Internet is and how it works.

In simple parlance, the Internet is a global network of interconnected computers. In fact it is a network of networks that include millions of private, public, business and government networks of local to global scope that are connected via copper wires, wireless connections, fibre-optic cables and other technologies. Every computer that is linked to the Internet is part of a network and this includes your computer at home as well. You may be using a **modem** or you may dial a number to connect to an Internet Service Provider (ISP).

Interconnected computers in a network can share information with the help of the Internet. A computer which is connected to the Internet can access information from several different computers by simply moving the data into its own local memory. And the same connection will allow the computer to send information to the other computers as well. The information sharing that happens through the Internet occurs through a system of packet switching using the **TCP/IP** system.

But you must always remember one thing that the Internet itself doesn't contain the information. It is wrong to say that "a document was found *on* the internet." The most appropriate thing to say is, "that the information was found *through* or *using* the Internet."

Another aspect about the Internet that is fascinating is that nobody really owns the Internet. But the Internet Society, a non-profit organisation established in 1992, looks after the policies and protocols which define how we use the Internet. The next sub-section will focus on the Internet's history and how it evolved into what it now is.



Modem: It is a device that modulates an analog carrier signal to encode digital information and also demodulates such a carrier signal to decode the transmitted information. Modem is the combination of two terms – modulator and demodulator.

TCP/IP: Stands for Transmission Control Protocol/Internet Protocol. TCP/IP is a model for information sharing in a network system. In computer sciences Protocol is a set of rules determining the format and transmission of data.

3.4.1: HISTORY OF INTERNET

The Internet came into being because of the efforts of some great visionaries of the 1960s. These people realized the potential value of allowing computers to share information among each other. It was JCR Licklider of MIT (Massachusetts Institute of Technology) who first proposed the need for a global network of computers in 1962. He even shifted to the Defense Advanced Research Projects Agency (DARPA) and went about developing the idea. Some other researchers like Leonard Kleinrock, Lawrence Roberts developed it further. Kleinrock developed the theory of switching packets while Roberts connected a California computer with a Masachussets computer in 1965 with the help of dial-up telephone lines. Kelinrock's packet switching theory was confirmed and Roberts moved from MIT to DARPA and developed the plan of the ARPANET.

The Internet, then known as the ARPANET, came online in 1969. Under the aegis of the Advanced Research Projects Agency (ARPA) four major computers in four universities (UCLA, Stanford Research Institute, UCSB and the University of Utah) were connected. By 1970 Harvard, MIT, BBN and Systems Development Corp (SDC) in Santa Monica were also added. The next few months saw the addition of Stanford, MIT's Lincoln Labs, Carnegie-Mellon, Case-Western Reserve U, NASA/Ames, Mitre, Burroughs, RAND, and the University of Illinois.

Initially, the Internet was mainly used by computer experts, scientists, engineers and librarians. It was a very complex system unlike the user friendly personal computers that we have today. It, however, developed further in the '70s because of the TCP/IP architecture, which was proposed by Bob Kahn and which was developed further by Vint Cerf and Kahn together. The Defense Department replaced Network Control Protocol (NCP) and adopted it in 1980. The universal acceptance came in 1983.

The Internet was initially funded by the American government and it was only limited to research organisations and universities and government offices. But in the early '90s Internet became commercial and Delphi became the first commercial online service to offer Internet service to its subscribers. And after Microsoft entered the commercial scene there was a complete shift to a commercially based Internet.



LET US KNOW

Who was the first to use the Internet? Charley Kline at UCLA sent the first packets on ARPANET as he tried to connect to Stanford Research Institute on Oct 29, 1969. The system crashed as he reached the G in LOGIN



CHECK YOUR PROGRESS

Q.4: How do you define a computer network?

Q.5: How is the Internet a network of networks?

Q.6: Who is an Internet service provider?

3.4.2 INTERNET IN INDIA

The Internet initiative in India was kicked off in the late '80s when the ERNET was launched. The Government of India, the United

Nations Development Programme (UNDP) and the Department of Electronics (DoE) funded the project and it involved 5 major institutions: The National Centre for Software Technology (NCST) Bombay, Indian Institute of Science (IISC) Bangalore, the five IITs and the DoE. While the Ernet has now grown beyond its initial stage and now provides Internet service to all major educational and research organisations in India. It is, however, not allowed to provide services to the common public.

For the average Indian, Internet arrived in August 15, 1995, when VSNL launched it services. Though the initial spread of Internet was pretty low, it caught up in the late '90s. The opening of the telecom sector also brought in several new players in the market.

3.4.3 CHARACTERISTICS OF INTERNET

As you know by now that Internet is basically a network of several networks of computers. Now this global phenomenon has certain basic characteristics as well. They are:

a) It is not centrally controlled by any central authority.
b) It is a globally distributed public resource system
c) The maintenance of Internet is based on the paradigm of co-operation and co-ordination.
d) The access to Internet and its resources is not equal around the world
e) There is equality among the netizens. People who use the Internet have equal amount of opportunity to access and use it.
f) It is a self-learning tool when one knows to use it.
g) There's a continued worldwide acceptance.
h) It is very comprehensive and wide highway for exchange of information of very large scale.
i) It is almost a revolution in terms of allowing masses access to information across the globe.
j) It has almost democratized the dissemination of information,

k) It has made it virtually impossible to keep any restrictions on information. No information remains absolutely secret because of it.

3.4.4 INTERNET'S CONTRIBUTION

From your own experience of using the Internet and after reading the previous sections you must be having a fair idea about the usefulness of the Internet. Its major work is to help in the communication process. And it is with this basis that the Internet has effectively contributed to the world. Some of its contributions are listed below:

a) It establishes an equal state of knowledge and information.
b) Information can flow all across the globe.
c) It helps find information not easily available otherwise.
d) It assists in interacting with faraway friends.
e) Internet allows one to advertise their product and to buy and sell stuff online.
f) It even assists in learning. Nowadays most distance learning qualifications can be gained over the Internet.



LET US KNOW

Among the new media equipments, there is something called the **Super Computers** – a far-superior information processing machine developed by a person called Seymur Cray in the USA a few decades back. This is a bank of quite a few computers connected together which can carry out millions of calculations or analysis of situations in second and minutes. This is very useful in case of weather forecasting, war situations etc. Our country has also developed a local version of this computer termed as **Param** which also enjoys a very good reputation in the developed western nations.

3.5 INTERNET SERVICES

After reading about the characteristics and the contribution of the Internet you must have surely come to know about the various services which the Internet renders. But the major Internet services are just a few and they are:

3.5.1 E-MAIL

Everyone knows what e-mail is. It is the most popular service provided by the Internet. E-mail or electronic mail is a computerised version of postal mail. E-mail is all about sending messages by the user from one computer to the recipient on another computer. An e-mail has a header or the address of the recipient and the body of the message, which is the information that has to be sent. This service was created for ARPANET by Ray Tomlinson who was also responsible for using the @ symbol to link the address and the username.

3.5.2 FILE TRANSFER PROTOCOL (FTP)

This service allows users to login to a remote machine and upload and download files to and fro. It's a method of gaining access to another machine in the Internet network and obtaining files from there. The advantages of FTP are manifold. It allows one to download new software for free or new versions of old programs. It also helps send and receive big files without any problem. Even if the operating systems are different there is no problem in sending or receiving files.

3.5.3 TELNET

It allows you to login to a remote machine, most likely a computer to which you have no physical access. You just need to know the name of the computer to which you need access to and you can then login to that computer through another computer. For instance, "telnet science. newu.edu" will connect you to the machine named science. newu.edu.

3.5.4 GOPHER

It's a menu based facility that provides information about the Internet. It's a protocol system which allows text files to be hierarchically organised so that the files can be viewed by users on remote computers. It was first developed at the University of Minnesota. The University wanted to develop a menu to access information and files in the campus through their local network. So the Gopher was developed and it was named after the university's mascot, the golden gopher.

The purpose of developing the Gopher protocol was to enable people, located in different institutions in different parts of America, to share files and documents and to have those documents so organised that the related files and documents would become easily accessible. It was very popular when it started out but with the advent of the World Wide Web and the Hyper Text Transfer Protocol Gopher's usage has decreased a lot. World Wide Web helps find and share files while the http allows one to get links to related documents and files.

3.5.5 WORLD WIDE WEB

The WWW or the world wide web is the most popular service offered by the Internet. In fact it is so popular that it has now become synonymous with the term Internet. The web is basically a storehouse of documents linked to one another through **http** and which can be viewed via the Internet. Web pages may contain text, images, video, and other data which can be browsed with a web browser.

It was developed in 1989 by Tim Berners-Lee and some other scientists at the European Laboratory for Particle Physics, more popularly known as CERN. Initially it was only used in universities and other official organizations. In 1993, CERN announced that the Web protocol could be used by anyone free of



http: Hyper text transfer protocol. It is the protocol used to transfer a world wide web page from one computer to another.

royalty. This was a big blow to the Gopher protocol which was patented by the University of Minnesota. The Web became more accessible to people and the Gopher lost out. In 1994, Berners-Lee founded the World Wide Web Consortium (W3C) and this consortium decided that the Web would be set up on royalty-free technology so that it could be easily adopted.

And by 1996 the Web became an international phenomenon. Initially the people only saw the benefits of free publishing and instant spread of information. But the realization that the Web also helps in instantaneous two-way communication led way for the setting up of web based commerce or e-commerce.



CHECK YOUR PROGRESS

Q.7: What are the most important features of the Internet?

Q.8: What are the services provided by the Internet?

Q.9: Why did the Gopher protocol die down?



ACTIVITY - A

1. Browse the World Wide Web and list the number of things you can do with the help of the Web for educational benefits.



3.6 LET US SUM UP

- Human beings who did calculations for different kinds of work were initially called computers.
- Several mechanical calculators were invented down the years to make calculations easier.
- Because human errors led to several problems and human calculations were very time-consuming, scientists and researchers made several attempts at making mechanical and then electronic machines which could do calculations.
- It was during the World War II that the need for calculating machines was largely felt. The American army had to search far and wide to get qualified individuals to do the calculations for their artilleries.
- Harvard Mark 1 and Colossus were two of the earliest computers. The former was built in America and the latter in Britain.
- The Zuse computers built in Nazi Germany by Konrad Zuse were perhaps the first computers even though his first three computers, Zuse 1, 2 and 3 were destroyed in the allied bombings. Despite his having built machines which were similar to the modern day computer, Zuse's attempts did not affect the computing revolution in America.
- Then came the ENIAC which became the UNIVAC and was commercially available to the public by the 1950s. Even IBM entered the scene and soon became monopolizing the computer market until the entry of Microsoft.
- Internet is a global network of networks which helps in the spreading and sharing of information and messages between and among different computers.
- One can send information, receive information and access any information stored in any computer in the network through the Internet.

- The Internet first came into being in 1969. It was then known as ARPANET and it only connected four computers in four universities.
- Initially the Internet was only used for research and governmental purposes but it soon became public in the 1990s.
- Delphi was the first company to offer Internet service to its consumers.
- In India the Internet was initiated by the Govt. of India, the UNDP and the Department of Electronics when they launched the ERNET involving five major institutions.
- Internet became public in India on August 15, 1995.
- The Internet is not controlled by any central organization and it is maintained on the principle of co-operation and co-ordination.
- The Internet establishes an equal state of knowledge and information where any kind of information can be acquired from any part of the world.
- The Internet renders several services like E-mail, FTP, Telnet, Gopher and World Wide Web.
- The World Wide Web is the most popular service of the Internet. And the Web on its own offers every other Internet service like e-mail and file transfer.
- The internet and computer has almost become a 'basic human need' for people across the world.



3.7 FURTHER READINGS

1. **Digital Media, Building the Global Audience** – *T K Ganesh (Gnosis Publishers, New Delhi)*.
2. **Impact of Internet on Journalism** – *Arun Bhatia (Akansha Publishing House, New Delhi)*.



3.8 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q.No.1: Human beings used to do all the major calculations in early times. There were no mechanical or electrical gadgets for any minor or major calculation. And people who used to do all these calculations were called computers. Computer was the designation given to these people.

Ans. to Q.No.2: The American army needed computers to do the calculations necessary to lob artilleries during war. The American army had developed many major bombs and artilleries during the World War II but they needed to make firing tables to use these. These firing tables would calculate the velocity, the gravity etc and help in firing the missiles. It was difficult to find as many people to make firing tables so the army was looking for some mechanical alternative to do the necessary calculations.

Ans. to Q.No.3: a) False, b) False, c) True, d) True, e) True, f) True, g) False, h) False

Ans. to Q.No.4: A network is a group of computers connected to each other by cables, wires and other technologies. The computers in a network can communicate with each other and share information and resources.

Ans. to Q.No.5: The Internet is a network of networks because it connects several small and big networks of computers from all over the world. All the interconnected computers in the Internet can share information among each other even if the computers are not in physical proximity to each other.

Ans. to Q.No.6: An Internet Service Provider is a company or a firm which offers Internet access to its customers. The ISP uses cable modems, wireless, dial-up etc. to connect the customers to Internet.

Ans. to Q.No.7: The most important feature of the Internet is the fact that it is not controlled by any authority. It is a resource system which is

globally distributed and it's built on the principle of co-operation and co-ordination.

Ans. to Q.No.8: The major services provided by the Internet are E-mail, File Transfer Protocol (FTP), Telnet, Gopher and the World Wide Web.

Ans. to Q.No.9: The Gopher protocol died down because of the emergence of the World Wide Web. Besides the University of Minnesota, who developed the Gopher protocol, conferred a copyright over the Gopher protocol. While the makers of the Internet made it a free resource for everyone to use.



3.9 POSSIBLE QUESTIONS

Q.1: The Internet and the World Wide Web are often used interchangeably. Discuss.

Q.2: The Internet is a global phenomenon. Discuss.

Q.3: The Americans are the major contributors in the development of computer technology. Elucidate.

Q.4: The Internet has found a worldwide acceptance. Comment.

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UNIT-4: DIGITAL MEDIA

UNIT STRUCTURE

4.1 Learning Objectives

4.2 Introduction

4.3 4.3.1 Digital media

4.3.2 Analog Media

4.3.3 Why go digital

4.3.4 Advantages of digital media

4.4 Digital video and Digital Television

4.4.1 Digital video

4.4.2 Digital video: A brief history

4.4.3 Digital TV

4.4.4 Advantages of DTV over analog TV

4.5 Digital radio and digital photography

4.5.1 Digital radio

4.5.2 Radio in a box

4.5.3 Digital photography

4.6 Let us sum up

4.7 Further reading

4.8 Answers to check your progress

4.9 Possible questions

4.1 LEARNING OBJECTIVES

After going through this unit you will be able to

- Define digital media
- Enumerate the advantages of digital media
- Define digital video
- Define digital TV
- Explain digital photography

4.2 INTRODUCTION

In today's age when every form of media is becoming digital, it is absolutely necessary to understand what 'digital' means and why is media increasingly turning towards digital technology? All forms of electronic goods are stressing on digitality. And you, being a media student, need to be aware of this transition towards a digital world.

This unit will, therefore, give you an idea about what the term 'digital' means and what digital media is. The unit will also elucidate the importance of digital media and define the various forms of digital media like digital TV, radio, video and digital photography.

The unit also stresses on why digital media is gaining momentum in today's world and what sets it apart from the existing analog system. You will also get a grasp of how digital media differs from analog media and how digital media outscores the analog system.

So, let's start with the concept of digital media. But before that we need to know what digital means. The next section will give you a proper understanding of this much talked about word.

4.3 DIGITAL MEDIA

4.3.1 DIGITAL MEDIA

Before we discuss what digital media is and why every media is slowly going digital, we need to understand the meaning of the term 'digital'. Digital is a form of electronic technology that produces, stores and processes any data in terms of two states —positive state and negative state. The positive state is expressed by the number 1 (one) and the negative state is expressed by 0 (zero). So, basically, whatever data is stored or transmitted digitally is done through a series of 0's and 1's. These state digits are called bits and a group of bits is called a byte.

The term digital is primarily used in computing technology where every bit of information is converted to the binary forms, i.e.,

0 and 1. Computers are the primary digital devices as they perform all calculations using ones and zeros.

Prior to the spread of digital technology, all electronic productions and transmissions occurred through the analog technology. Even media ran on analog technology. Images or video or audio were produced with analog devices like the old fashioned analog cameras and audio tapes and recorders. Their transmission too was through analog technology.

Nowadays, however every media form is trying to incorporate the digital technology in production and transmission, be it in television, radio, video or photography. The analog technology, however, still exists in most countries.

Therefore, we can say that, digital media indicates to those types of electronic media that work on digital codes or 0's and 1's. Digital media refers to all kinds of media forms, like video, audio and still images that can be produced and distributed through the binary forms.

The most popular forms of digital media are:

1. Digital video
2. Digital television
3. Digital radio
4. Digital photography
5. e-book
6. Internet
7. Video games
8. World Wide Web
9. Cell phones
10. Compact discs

4.3.2 DIGITAL MEDIA VS. ANALOG MEDIA

From the previous sub-section, you may have got a basic idea about what digital media is. But to understand the concept in its totality you need to understand it in relation to analog media.

Digital media is in the process of completely replacing analog media. Therefore, you need to understand what analog media is to get a clearer knowledge about the gradual transition from analog to digital.

As mentioned earlier, digital media devices are computers, hard discs, CD players and recorders, cell phones etc. On the other hand analog devices are the VCRs, tape players and record players. While, digital devices record and read data in the form of 0s and 1s, analog devices record and read data linearly from one point to another. They scan the physical data, reading the 'ups' and 'downs', the bumps and dips and then transmits the data in the form of a audio or video signal.

But the fact remains that in the digital reading the 0's and the 1's only estimate the sound or video wave, while in the analog reading it is the actual sound or video which is recorded. So, analog technology actually provides a better representation of the data or information.

4.3.3 WHY GO DIGITAL?

As mentioned in the previous section, analog technology provides the exact representation of any data than the digital technology. Why then is digital technology being preferred? Why is analog technology dying a slow death? The reason is because of the growing importance of computers.

Nowadays, most of our work is done on and by computers. And computers are essentially digital processing machines. They run on the binary numbers 0 and 1. When most of our work has to be done on computers the data we feed to the computer has to be digital as well. So, whatever data we produce or read through analog technology has to be converted to digital codes so that they can be fed on a computer and worked on. All analog video or audio has to be converted to digital data to make them work on a computer. Once the data is digital and fed on to the computer, the computer can edit the data as well as add effects that would otherwise not be possible.

Secondly, digital data is non-linear. They can be edited or played from any point. This saves a lot of time as compared to working on analog tapes. Digital technology helps to create, edit and reproduce any data much faster and easier. Also digital data has a longer time span. They do not wear out even after repeated use unlike the analog tapes or records.

Therefore, even though digital information is not as exact as analog information, it's more popular and easier to work on. Digital technology stores information in discrete pieces of information. Analog technology attempts to store exact information which may be accurate to start with, but can gradually deteriorate over time. Because digital is more compatible and does not degrade over time, digital technology is the common choice for today's audio and video formats.

4.3.4 ADVANTAGES OF DIGITAL MEDIA

Digital technology is most definitely the most preferred form of technology in every electronic sphere. And the media is no exception. Gradually almost every electronic media device is going the digital way. We have digital TV transmission, digital TV sets, digital music systems, digital cameras et al. This total transition to digital technology has several advantages. They are:

- Most work, these days, is done on computers and computers are digital. Digital media is, therefore, more compatible with computers.
- In digital media printing process, full colour designs cost the same as one colour designs. But in analog media printing process, each colour costs extra.
- Digital media is almost entirely based on computers and hence there is less paper work. Most work is done in the virtual world which reduces other costs.
- Digital media is non-linear. The digital technology allows any data to be edited from any point. One need not start editing right from the first to the last.

- Besides, playing something on celluloid tapes is quite cumbersome and the tapes get damaged comparatively much sooner than the digital equipments.



LET US KNOW

Because of the advantages of digital media the All India Radio (AIR) has taken up an initiative to transfer all of its tapes stored in its archives into DVDs a few years ago. This way, quality of the audio-visual or audio or visual programmes separately remain quite high for a very long time which we can't expect in case of tapes.



CHECK YOUR PROGRESS

Q.1: What does the term 'digital' mean?

Q.2: What is analog technology?

Q.3: What is the most important reason for the rapid spread of digital technology?

4.4 DIGITAL VIDEO AND DIGITAL TELEVISION

4.4.1 DIGITAL VIDEO

Digital video is one of the most common forms of digital media. It is a type of video recording system that uses digital video

signals rather than analog signals. It is audio/visual data in the binary format. Digital video information is presented as a series of 0's and 1's. It offers several advantages over analog video, which is why digital video is preferred. Digital video can be easily stored and shared. The digital video data can be copied over and over without any affect on the quality. The data can be copied easily and without any major expense.

Digital video is made up of a series of orthogonal bitmap digital images which are displayed in rapid succession at a constant rate. These images are called frames. Every frame comprises of a **raster** of **pixels**. If the width is W pixels and the height is H pixels, the frames size is W x H.

The only property that pixels have is their colour. The colour of each pixel is represented by a fixed amount of bits. If the bits are more, more subtle variations of colour can be reproduced. This is called colour depth (CD) of the video.



Pixel: A pixel is the smallest piece of information in an image. Pixels are usually arranged in a 2-dimensional grid, and are often represented using dots or squares.
Raster: It is the rectangular formation of parallel scanning lines that guide the electron beam on a television screen or a computer monitor.

4.4.2 DIGITAL VIDEO: A BRIEF HISTORY

In the 1970s and 1980s several types of video production equipment were introduced that would take an analog video input and convert them into digital signals. It was easier to work on the digital signals, to make necessary corrections and to add effects. Once the digital signals were enhanced, they were again converted into analog video. Some of these video equipment were time base correctors (TBC) and digital video effects (DVE) units. In the latter half of the '70s, digital video tape recorders were developed by some video equipment manufacturers in their own laboratories. But none of these machines were marketed commercially.

Digital video first came into the commercial market in 1986 with the **Sony D-1** format. It was able to record uncompressed standard definition component video signal in digital form. But these machines were very expensive and so were only used by big television networks. However, in no time, cheaper versions using



Sony's D1 format was the first major professional digital video format, introduced in 1986. D1 was very expensive and the equipment required very large infrastructure changes in facilities which upgraded to this format.

compressed data, like Sony's Digital Betacam, were introduced. This video format is still very popular among TV producers.

Digital video for common consumers first appeared in the form of QuickTime in 1990. The first few consumer level content creation tools were very basic and crude. It would require an analog video source to be digitised to make it computer readable. Gradually, however, the quality of consumer digital video increased rapidly with the introduction of playback standards like MPEG-1 and MPEG-2. Then came the DV tapes, which allowed direct recording to digital data, simplifying the editing process. Non-linear editing systems became cheap and popular as video editing could be now done on computers without any external playback or recording equipment.

4.4.3 DIGITAL TV

Digital television or DTV is all about sending and receiving moving images and sound by discrete digital symbols. The concept of Digital TV involves digital broadcasting and digital TV sets. Digital broadcasting implements digital technology to provide a greater number of channels and better quality of picture and sound. It involves over-the-air broadcasts to a conventional antenna instead of a satellite dish or cable connection.

Broadcasting has, since recently, been based on analog technology and so has been our regular TV sets. But, owing to the benefits of digital technology over analog, nowadays most countries are shifting towards total digital broadcasting. And most hi-end television sets are also digital.

Till the end of 2007, seven countries had completed the process of turning off analog terrestrial (over-the-air) broadcasting. In 2006 Luxembourg became the first country to make a complete switch to digital broadcasting. It was followed by Netherlands sometime later in 2006, Finland, Andorra, Sweden, Norway and Switzerland in 2007, Belgium and Germany in 2008, and the United States in June, 2009. Japan is set to switch over in July 2011, Canada

in August, 2011, UK will complete the process by 2012 and China plans to complete the process by 2015.

In India we still have both digital and analog broadcasting available. Digital satellite broadcasting is the most common with major players being Airtel Digital TV, Tata Sky, Dish TV etc. These digital broadcasters provide a set-top box which receives the digital signals and converts them into analog signals for our analog TV sets.

Digital television can be received by various different ways. The oldest way to receive digital signals is through an antenna. Known as the Digital Terrestrial Television or DTT, it has on offer only those channels which the antenna picks up. Even the signal quality might vary.

Digital cable and digital satellite are two of the newest ways. Digital satellite transmission is offered by the DTH (Direct To Home) suppliers like Tata Sky, Dish TV, Airtel Digital TV etc. This service provides every consumer with a separate dish antenna and a set top box. The antenna receives digital signals from the satellite and the set top box converts these signals into analog signals so that it can be transmitted on our analog TVs. Owing to the popularity of DTH's digital satellite transmission, even cable TV suppliers have now entered the field of digital transmission.

IPTV (Internet Protocol Television) is another way to receive digital television. It's about receiving TV via Internet Protocol through DSL (digital subscriber line) or optical cable line. There are several Internet television software with which you can watch TV on the computer.

4.4.4 ADVANTAGES OF DTV OVER ANALOG TV

The gradual transition from analog to digital TV is a common phenomenon the world over. And the reasons are plenty:

- Digital channels take up less bandwidth. So, broadcasters can provide more digital channels in the same space. The less

bandwidth also helps to provide high-definition television service as well as other non-television services like multimedia or interactivity.

- DTV also allows special services like multiplexing, i.e. more programmes on the same channel plus, electronic programme guides and additional languages, spoken or subtitled.
- Digital signals are better at avoiding interference than analog signals. In analog television, problems like ghosting of images, noise from weak signals etc may arise. These problems degrade the quality of the image and sound. Digital signals, however, can resist such problems by using numeric codes. Even if some information is missing, the decoder computer can reconstruct the complete signal.



CHECK YOUR PROGRESS

Q.4: What does Digital TV mean?

Q.5: What is a DV tape?

Q.6: What is IPTV?

4.5 DIGITAL RADIO AND DIGITAL PHOTOGRAPHY

4.5.1 DIGITAL RADIO

Digital radio transmits sound as computerised bits of information unlike analog radio. It is often called DAB digital radio,

where DAB stands for **digital audio broadcasting**, which is the name of the transmission system. Much like DTV, even digital radio takes up less bandwidth than the traditional analog technology. So there's room for more radio stations plus other features.

Digital radio offers national, local and regional stations which cater to all types of interests and people. The digital radio reception is much better with no interfering noises or station overlap that generally happens with AM and even FM radio. The tuning system in digital radio is simple and only requires the press of a button. No fiddling with a dial to get a good signal, no need to remember frequencies.

Digital radio also has a display screen to give information about what is being played like the song details, news headlines and email address. Some radios also have an electronic programme guide (EPG). Digital radio can also be transmitted through the Internet and through digital TV.

Digital radio signals cannot be received on the traditional analog radio sets. They can be accessed through the following ways:

- DAB digital radio set is the most common way to receive digital radio signals. Just like the analog sets, they are also available in many types—hand-held, portable, car radios, hi-fi tuners etc. The set will have a DAB logo on it. But do check whether your area has digital radio service.
- Digital radio can also be received through all digital TV platforms.
- Internet is another way to receive digital radio. All one needs are speakers or a headphone plug to the computer.

Digital radio is not as popular as other digital technology. But even this has its advantages over AM/FM radio or analog radio. All AM / FM signals receive major interference caused by physical obstructions in the form of buildings, mountains, airplanes and weather conditions. While listening to AM or FM radio, one can hear distant hisses and pops. These disturbances are caused by multi-

path interference which occurs when the signals bounces off physical obstructions.

DAB however provides crystal clear sound. Inside the receiver of a digital radio, there is a computer which sorts out the numerous multi-path signals and other distortions to improve the main signal. It only focuses on enhancing the main signal by ignoring the other obstructing signals.

Another advantage about DAB is that it is very flexible. For instance, generally six programme channels can be transmitted through a DAB set at a time. While some of these programmes, like talk-shows or interviews, require less audio data, some other shows (concerts, songs) will require more data. DAB can easily adjust to each of the requirements. Then again, in DAB the number of channels can depend on the time of the day. You can demand specific broadcasting, for instance, on a match day, a stereo channel can be divided into a sports channel and a single channel for news.

4.5.2 RADIO IN A BOX

The Radio In A Box (RIAB) concept was introduced to reach out to the millions of people who reside in most inaccessible areas of the world. It is a portable radio station which can be set up in any remote area without much technological support. It's set in a shock-proof case to withstand transportation to remote locations and harsh conditions.

The RIAB contains all the equipment to have a stereo FM radio station set up in a matter of minutes. The system is pre-wired and ready for use. One has to simply install the antenna on the highest point around the area, run the coax to the transmitter, hook up the power (local or generator) and you are on air.

The concept of RIAB has been used in several war-torn zones and areas prone to natural disasters. In Afghanistan, the US army uses the RIAB to isolate the Taliban influence among the people. The Radio Zormat, which started as a 50-watt FM transmitter in

2007 reaches people living within the six mile radius of the town of Zormat. It's now a 250-watt transmitter with three DJs broadcasting in Pashtu language to an audience which is hungry for news, music and call-in shows. The army also pushes its own messages in between the shows. And whenever the Taliban tries to go on air with their radio programmes, Radio Zormat intercepts the Taliban frequency and throws an electronic snowstorm into their transmission. The army has also distributed over 1500 radios that can pick up the station.

4.5.3 DIGITAL PHOTOGRAPHY

Digital photography is the most popular form of digital technology that is in use. Analog cameras are now almost obsolete and have become hard to find. Digital photography, in simple terms, uses digital technology to capture still and moving images. Earlier the cameras that were used to capture images used photographic films to create these images which were then chemically processed in a separate environment (dark rooms) to make the pictures visible. In digital photography, however, the pictures can be created, printed, stored, distributed and archived through digital and computer techniques. There is no need of celluloid reels for capturing the pictures.

Besides, in digital photography, subsequent copies of photographs can be produced without even a slight loss of image quality which is not the case in normal reel photography system. Also, digital photos can be downloaded into a simple computer and if needed corrections can be done (or doctoring) before printing them with a usual printer. In other words, the entire business of photography has been made far simpler because of the digital technological advancement.

A digital camera generally uses a digital memory device to store the images, which can be further transferred to a computer. Digi-cams can take pictures and also record audio and video. Some

can be used as webcams and some cameras can be connected to the TV so that the pictures can be seen in screen.

The advantages of digital photography are many. Some of them are discussed below:

- Immediate gratification. Digital pictures can be seen on the camera's LCD monitor right after the picture has been taken.
- For professional photographers, there is the satisfaction of delivering the pictures quickly. It takes hardly any time to burn (download it into a CD / DVD through the computer) a CD or take a print of the pictures once the camera is connected to a computer.
- Digital images can be modified on the computer without any fuss. You can add light if the picture is dark, add saturation, colour, use effects like cropping, gray scale etc.
- They are easier to store. Film rolls and the printouts take several file cabinets. But digital images can be stored in disk drives.
- Filming and processing costs have come down considerably.
- Digital photography is also less harmful to the environment. The processing of films is a toxic business. The chemicals used while processing are bad for the environment.
- Digital images can be printed over and over without any degradation in quality. But the negatives of a roll, if processed too many times, will not give the same quality as the original picture.



CHECK YOUR PROGRESS

Q.7: What are the three ways to receive digital radio signals?

Q.8: What is Radio In A Box?

Q.9: How is analog photography harmful for the environment?



4.6 LET US SUM UP

1. Digital media refers to media which is produced, stored and transmitted through digital technology.
2. Digital technology involves binary numbers—1 and 0—to process any data. So, whatever data is stored or transmitted digitally is done through a series of zeroes and ones.
3. Computers are the primary digital devices. And nowadays, almost every other media form is becoming digital as well.
4. The most common forms of digital media are digital video, digital radio, digital TV, digital cameras etc.
5. Before digital technology became such a force in the media world, it was analog technology which was extensively used.
6. In analog technology the data (audio/ video) is physically scanned, reading the bumps and dips unlike in digital technology where the data is read in the form of the binary codes.
7. Analog technology, therefore, provides the exact sound or video while digital is a mere representation of the data. Despite this, digital technology is preferred over analog.
8. The main reason for the popularity of digital technology is because computers are digital machines and nowadays most work is done on computers. So, people prefer to create digital data to store it easily on computers.

9. Digital technology allows electronic data to be stored for a much longer time.
10. Digital transmission enables hi-quality transmission.
11. Digital data can be reproduced several times without any degradation of quality.
12. Digital data can be processed in very short time.
13. Most work is done on computers, so other costs are reduced.
14. Digital media allows non-linear processing of data. You need not work on digital data from start to finish. The data can be edited and worked on from any point.
15. Digital video refers to a type of digital recording system which uses digital signals rather than analog ones. Audio/visual data in binary format implies digital video.
16. DTV or digital TV, on the other hand, is television which involves digital sending and receiving of audio/video signals. Broadcasters, the world over are now relying on digital technology to transmit hi-quality television programming to viewers.
17. DTV is preferred over analog TV because digital channels take up less bandwidth. Therefore, operators can provide more channels in the same bandwidth space. Less bandwidth also provides many other services like interactivity, multimedia, electronic programme guides and additional languages.
18. Also, digital signals are more adept at blocking interference. Analog television is prone to image blurring, noise from weak signals etc. But all this is avoided in DTV because of the numeric codes. Even if some signal goes missing, the decoder computer can reconstruct the missing signal.
19. Digital radio is another popular digital media form and this involves transmitting sound as computerised bits of information.
20. Digital radio signals can be received on digital radio sets, on digital TV platforms and through the Internet.
21. Radio In A Box refers to a radio set-up in a box which can be carried to various locations for transmission of radio programmes. It has been

designed to cater to those areas which have no access to any other forms of media.

22. Digital photography is the most common forms of digital media as digital cameras have completely replaced the traditional camera with film. Simply put, digital photography employs digital technology for capturing both still and moving images. Digital cameras have an in built memory device to stock the images which can be later transferred to a computer.



4.7 FURTHER READINGS

1. **Digital Media, Building the Global Audience** – *T K Ganesh (Gnosis Publishers, New Delhi)*.
2. **Impact of Internet on Journalism** – *Arun Bhatia (Akansha Publishing House, New Delhi)*.
3. **Net, Media and Mass Communication** – *Jagadish Chakraborty (Authors Press, New Delhi)*.



4.8 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q.No.1 : The word digital implies an electronic technology that uses the two numbers (0 and 1) to produce, store and process any form of data. Digital technology is now used extensively in all media forms.

Ans. to Q.No.2 : Analog technology refers to that system which reads any data, audio or video, in its actual form, unlike digital data which reads data in the form of ones and zeroes. Analog technology scans the physical data from one point to the other and then transmits it into a signal. Human beings perceive the world in analog. Everything we hear and see is a continuous transmission of information to our senses. This stream is what can be called as analog data.

3. The most important reason for most technologies going digital is because of the ever-increasing importance of computers. Computational technology is digital and it only accepts digital data. We can edit or enhance any form of data only on a computer. Therefore, it's important that the data is digital as well. If the data is analog, then we need devices to transform the analog data into digital data before it is fed on a computer. This process is very cumbersome. So most technologies are going the digital way so that the data they create can be directly worked on a computer.

Ans. to Q.No.3 : Digital TV or DTV is television broadcast through digital technology. It involves sending and receiving moving images and sound via digital symbols. Digital broadcasting happens either through satellite or via cables. The DTH suppliers all provide digital television via satellite.

Ans. to Q.No.4 : DV tape or Digital Video tape is a digital video format created by Sony, JVC, Panasonic and other video camera producers, and launched in 1995.

Ans. to Q.No.5 : IPTV is digital TV through the Internet. It's another way of receiving digital TV transmission via Internet Protocol through DSL or optical line.

Ans. to Q.No.6 : The first and most common way to receive digital radio signals are through the regular digital radio sets which are available in the market. They come in various types like car radios, hi-fi tuners, portable and hand-held. One can also receive digital radio on every digital TV platforms and through the Internet. For the latter you will need speakers or headphones connected to the computer.

Ans. to Q.No.7 : The concept of Radio In A Box is a very humane effort to take technology to areas which are cut off from the rest of the world. It enables radio transmission with minimum technological requirements. Set in a sturdy box, it is a portable mini radio station which can be set up in any remote location without much fuss.

Ans. to Q.No.8 : Analog photography involves chemical processing of the reel. The chemicals used in this process are very toxic and are thus harmful to the environment.



4.9 POSSIBLE QUESTIONS

Q.1: Discuss the advantages of digital technology over analog technology on the basis of all the major digital media.

Q.2: Almost every country is switching over to digital TV. Analog TV will gradually become obsolete. Comment.

Q.3: Why has digital radio not become as popular as digital TV or digital photography?

Q.4: What are the benefits of the Radio IN A Box concept?

Q.5: Are you aware of any areas where analog technology may still have some amount of requirements for various reasons. If yes, describe them.

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UNIT-5: ONLINE JOURNALISM

UNIT STRUCTURE

5.1 Learning Objectives

5.2 Introduction

5.3 What's online journalism?

- 5.3.1 Difference between online journalism and traditional journalism
- 5.3.2 History of online journalism

5.4 Characteristics of online journalism

- 5.4.1 Advantages of online journalism
- 5.4.2 Limitations of online journalism
- 5.4.3 Ethics of online journalism

5.5 Let us sum up

5.6 Further reading

5.7 Answers to check your progress

5.8 Possible questions

5.1 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Define online journalism
- Differentiate between online journalism and traditional journalism
- Discuss the history of online journalism
- List the characteristics of online journalism
- Enumerate its advantages and limitations
- Explain the ethicality of online reporting

5.2 INTRODUCTION

Journalism is all about spreading news, sharing information and it helps to create awareness about the environment we live in. And there are various media to do so. The most common form of journalism is the traditional journalism, i.e. through newspapers and magazines or the print

media. Even television and radio are two very popular media. But the latest to join this sphere is the Internet.

Despite the huge presence of traditional journalistic mediums, the Internet has become a very popular medium in a very short period of time. Therefore Media students can no longer stick to learning about the traditional vehicles of news production and reporting alone. Online or cyber journalism is a growing field and a knowledge of this will stand one in good stead in the years to come.

5.3 WHAT'S ONLINE JOURNALISM?

Online journalism is reporting of news and views through the Internet. It is different from traditional journalism in the sense that the medium is different. While traditionally, journalists have used the print medium for reporting news, online journalists use the World Wide Web to do the same.

The web is the most far-reaching and extensive communication medium in the world right now. It has built a bridge among millions of people divided by geographical boundaries and has brought so many communities and groups together. Anyone can address a huge number of people through the web. Its potential is huge and this realisation has led to the rise of online news production. All major and not so major news producing companies have online editions these days.

Online journalism has played a major role in making news 'immediate' and accessible. It's not just the 24 hour news channels on TV which give minute-by-minute updates on world happenings; even the news websites upload information instantly.

The web can be used in all the stages of journalism. You can access the background information through the electronic archives, you can get in touch with the people necessary for your story and you can upload your news and views in no time.

Online journalism, therefore, is a concept that has made news a common commodity. One can not only keep track of the world's happenings through the web but even local news about one's hometown can be

accessed from some remote corner of the world. News is no longer confined by geographical boundaries.

Internet journalism not only provides very up-to-date news details, but also acts as a highly comprehensive storehouse of background information about the news items. This is not possible in print, TV and Radio because of paucity of space and also time to some extent.

5.3.1 DIFFERENCE BETWEEN ONLINE JOURNALISM AND TRADITIONAL JOURNALISM

Online journalism is definitely rooted in the values of traditional journalism but it differs from the latter in several ways. The main difference lies in its distinctive features that are embedded in technology — the technology which allows limitless possibilities in terms of processing and distribution of news. The other differences that stem out of this major feature of online journalism are:

i) Online journalism is supported by the Internet and the Internet has the ability to mix multiple media which is not possible in case of traditional mass media.

ii) In online journalism the author has no control over the reader. No one can control the audience's attention or his choice.

iii) Interactivity is maximum. Through the Internet, the author and the reader can exchange views regarding the matter written.

iv) The Internet enables the communication process to be continuous.

v) News spreads with lightning speed through the Internet. In traditional mass media immediacy is not really possible.

vi) Online journalists have to take several new decisions that his or her counterpart in the traditional format doesn't require. The cyber journalist has to decide which media format suits a story best; he has to allow room for options for the public to respond, interact with the readers and also consider ways to connect history with some other relevant stories through hyperlinks.

vii) News items in a newspaper, TV or Radio channel are expected to be read or listened to or watched by the masses almost at the same time. This is not the case for internet edition journalism in which the target audiences would do so only at their own leisure.

viii) It is a bit cumbersome to retrieve old issues or bulletins of print, TV and Radio journalism. But in internet journalism this is a very comfortable exercise which does not require a lot of efforts to look at earlier bulletins, issues.

5.3.2 HISTORY OF ONLINE JOURNALISM

The development of online journalism has been a gradual but ongoing process, and it has changed the face of traditional journalism. It had its roots in the teletext system of the 1970s. Through teletext, news and information in the form of words and numbers were displayed on television screens for public viewing. Teletext enabled viewers to access news for free without the use of a telephone or computer. But the system allowed only very brief information to be displayed. Even the graphics used were of poor quality and took a lot of time to be uploaded. Several companies started the teletext systems in the ’70s and ’80s but none were successful.

After teletext came another type of digital journalism, Videotex. It was invented at British Telecom. Videotex refers to various computer-based interactive systems that electronically deliver text, numbers, and graphics via telephone lines, two-way cable, computer networks or any combination of the three, for the display on a TV set, video monitor or personal computer. It was a major breakthrough in the online sphere because it enabled consumers to send and receive data. Videotex played the role of a catalyst in the development of online news journalism.

Online journalism as we know today is rooted and sustained by the World Wide Web. The first journalism website was launched

in November 1993 at the University of Florida College of Journalism and Communications. The next year on January 19, the Palo Alto Weekly in California became the first newspaper to publish regularly on the net. This was followed by several other companies who realized that the web offered a fast, innovative and cost-effective way to deliver news to people.



CHECK YOUR PROGRESS

Q.1: Define online journalism.

Q.2: What is the teletext service?

Q.3: News is immediate in online journalism. Explain.

5.4 CHARACTERISTICS OF ONLINE JOURNALISM

Online journalism, as mentioned earlier is a relatively new domain and you have already read about its differences from the traditional form. To understand these differences better you will need to know the basic characteristics of online journalism. The major features of this form of journalism are hypertext, interactivity and multimedia.

Hypertext: In online journalism, a story or report can have several other stories linked to it via hyperlinks. If an online journalist finds it necessary he may substantiate his story with other relevant material by linking his writeup with that of others. These related stories may be available in the news website itself or in any other page on the world wide web. Such linked

stories supplement the main story and give background information to the reader.

Interactivity: Online journalism allows maximum interactivity. Even newspapers have options for readers writing; TV and radio listeners can write or call to give their feedback. But readers of online stories can not only give their views but also receive their replies from the writer in no time. There is a steady flow of information between the sender and the reciever.

Multimedia: Use of multimedia is another important feature of online reporting. Stories published on the web can be supplemented by pictures, graphics, audio streams and video footage. Covergence is responsible for making this possible.

Apart from the three major characteristics, other aspects that characterise online journalism are its archiving capacity, its immediacy and its non-linear structure. Websites maintain an archive where they store all their old and relevant stories and readers can access them at any given time. Such a thing is not possible with traditional media formats. Even though newspapers and TV stations archive their stories, it is not easy for the consumers to get an access to them.

The immediacy of online journalism is known to all. Any event or happening is immediately uploaded on news websites and people can read about them. They give direct competition to news channels when it comes to breaking news.

In online journalism the consumption of information is non-linear. Web-users can select which stories they would like to read first. Websites do have the main news stories on the front page of the site but readers can ignore those and read the other smaller stories which have links on the front page. In radio and TV, all stories are presented in an order as per the directives of the newsroom executives. Also the presentation is non-linear because information is not put up in a large block of text. Instead it is divided into sections and linked accordingly. So, a reader can read the critical part of it or maybe access the background information.

5.4.1 ADVANTAGES OF ONLINE JOURNALISM

If you have understood the characteritics of online journalism then you must have also understood the fact that its characteristic features are actually its advantages. The technological advancements and the popularity of web-based journalism has several postive aspects. Online journalism not only extends the best aspects about traditional journalism but also enhances it with techonological advancements. The involvement of the Internet has brought in a number of strategic advantages. Some of the advantages are:

1. Online publishing may attract new readers. Newspapers, have different objectives behind their online editions but the most important objective is to reach out to more readers and to promote the print product. And the online section helps in that regard.
2. Online journalism has major archival capacity. Stories can be stored online for years.
3. Online publishing can decrease and sometimes eliminate the publishing and distribution costs.
4. Online journalists have ample space to write their stories, unlike in newspapers and magazines. They can cover different aspects and do in-depth coverage.
5. The Internet allows multimedia usage. Any news can be supplemented with text, video, audio streams, pictures and graphics.
6. Interactivity is another positive factor of Internet journalism. It allows readers, writers and editors to interact with each other more frequently and directly.
7. The widespread access to the Internet allows the reader accessibilty to information from all over the globe. The reader is no longer bound by the local mediums. It readily receives a worldwide audience.

5.4.2 LIMITATIONS OF ONLINE JOURNALISM

There may be several advantages of online journalism but it cannot be without some shortcomings. Some of the disadvantages are:

1. The biggest shortcoming of online journalism is that there is no credibilty about the online sources. On the web anonymous writers can put up their view and get away with it. Anyone with a Internet connection can become a journalist and not just names, even organisations can be made up. Even reliable news websites may give unreliable information by hyperlinking pages outside their website. These linked pages may not be providing accurate information, thereby misleading the reader.
2. Another disadvantage of online journalism may spring from one of its advantage itself. Online journalism is known to be very fast and sometimes in its race to give out information, several major details may be missed out. The speed at which news can be pumped out, the rate of errors increases. Carelessness and oversight is maximum when the speed of work is so high.
3. Plagiarism, photo manipulation and posting supplementary material are the other drawbacks. There is no set rules that define journalism on the web. So, there is no way to check plagiarism. Technological advancements have also attributed to the increase in photo doctoring, wherein pictures can be tampered with and uplaoded as representing something totally false. Unlike traditional journalism where there are set rules as to formats and standards of journalism, online journalism has yet to reach that stage.

5.4.3 ETHICAL CONSTRAINTS OF ONLINE JOURNALISM

By now you must have seen that online journalism has many more positive traits in comparison to the negatives. But the ethicality of online journalism transcends all the positives that it entails. Traditional journalists have a set code of ethics which may not be

written down per se but which are followed nonetheless. Such codes originated with print media but were later reworked to include broadcast media as well. But the recent shift towards online journalism has left several grey areas in journalistic ethics. The journalistic code of ethics has yet to be updated to include web writing in its purview.

The biggest ethical question that arises in this form of journalism is the debate between speed and accuracy – whether information should be published immediately or one should wait to verify facts. This debate has been a bone of contention even in traditional media formats. But with online journalism this issue seems to have reached a higher plain. One of the main features of cyber journalism is its immediacy. News events are uploaded as and when they happen without considering the authenticity or accuracy of the information. In the mad rush to put up breaking news online most websites completely ignore to check the facts, which is a huge violation of the ethical standards of journalism.

Another ethical constraint to online journalism stems from the advertisers' demands. The journalist requires total independence to produce objective stories but when he has to consider advertising requirements his reporting loses its objectivity. And this is a total breach of ethical standards. It is easier to distinguish between editorial content and advertising content in the newspapers and broadcast media. But in the online format the distinction is blurred. The problem is further aggravated by the fact that website owners receive no monetary gains from their readers. Internet users do not pay any money to access websites. Whatever revenue they generate is through the advertisers, so it becomes essential for them to keep them happy.

The archival strength of online journalism also proves to be a bane sometimes. As mentioned earlier, websites can store information and pictures from around the globe and archive them for an indefinite period of time. This means that any incorrect

information or ethical breaches could be more damaging and widespread. Incorrect information will be archived and that will be passed on to users who access the site.

The hyperlinks on websites are also an issue with this form of journalism. Many stories on different websites have hyperlinks to other websites with similar stories. These hyperlinked information may not be correct. The reporter cannot ensure the accuracy of the linked information. To deal with this the reporters and editors should monitor the linked information and also warn the users that the linked story is not a part of their website.



CHECK YOUR PROGRESS

Q.4: Explain the non-linear structure of online journalism.

Q.5: What are the positives of online writing for reporters?

Q.6: Fill in the blanks:

a) Online journalism has maximum _____ capacity.

b) The major drawback of online reporting stems from its _____ constraints.

c) Most newspapers today have their own _____ editions.

d) Online editions eliminate _____ costs.

e) Online newspapers generate their revenue from _____ .



ACTIVITY - A

1. Take a major newspaper like the Assam Tribune and read the main stories. Now check the online edition of the same newspaper and find out the major differences, if any, in the writing style of the same news story.



5.5 LET US SUM UP

- Online journalism is a term used to define that segment of journalism which is done through the use of the Internet.
- After print, radio and broadcast journalism, online journalism is the new form of journalism which has become very popular in a short span of time.
- It is different from the traditional forms in several ways.
- Online journalism uses multimedia like images, sound and video to complement the story.
- Online journalism is interactive as the writer and the reader can interact on an immediate basis.
- News spreads faster through online reporting.
- Online journalism is not a very old phenomenon but it has become popular in a very short span of time.
- The World Wide Web is responsible for the spread of this form of journalism.
- The characteristics of online journalism are hypertext, interactivity, multimedia usage, its archiving capacity, immediacy of news and its non-linear structure.
- The advantages of online journalism are: maximum interaction between writer and reader, huge archival capability, use of multimedia, it can decrease publishing costs, widespread accessibility etc.
- Online journalism has its limitations as well. The biggest drawback of online journalism is its ethical looseness. Online journalism has

several ethical issues to counter before it can be accepted as a completely credible form of reporting.

- Plagiarism, doctored photographs and uploading substandard information are the other drawbacks.



5.6 FURTHER READINGS

1. **Digital Media, Building the Global Audience** – *T K Ganesh (Gnosis Publishers, New Delhi)*.
2. **Impact of Internet on Journalism** – *Arun Bhatia (Akansha Publishing House, New Delhi)*.
3. **Net, Media and Mass Communication** – *Jagadish Chakraborty (Authors Press, New Delhi).*



5.7 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q.No.1: Online journalism is that form of news reporting or news production that relies on the World Wide Web for its transmission. News stories and reports are uploaded on websites and Internet users can access it by going to the websites.

Ans. to Q.No.2: The teletext service can be called a precursor of the online news reporting of today. It was a service developed in the 1970s in UK, where bits of news and information were transmitted on television sets. National, international, sports, weather and TV schedules were transmitted through the TV.

Ans. to Q.No.3: One of the main features of online journalism is its immediacy. Events and happenings from all over the world can be uploaded on news websites with immediate effect. Just like broadcast journalism, online news reporting is fast and most of the times accurate. People who do not have access to television all the time can check the news on the web. Specially office goers can nowadays, keep abreast of all the latest happenings with just a click of the mouse.

Ans. to Q.No.4: The structure of online journalism is said to be non-linear because the information can be accessed in a non-linear way. The home page of a website has almost all its stories mentioned and it's the reader who decides which story he or she wishes to read. The editor or writer cannot enforce his will on the reader. In other forms of media like newspapers or TV news, it is the editor who decides which news is important, thereby placing it over other 'insignificant' news. On websites, the internet users can read the entertainment and sports stories before he reads the political news. These two segments generally come in the latter half of TV news or in the backpages on newspapers. Even the presentation is non-linear because news stories aren't placed as huge chunks of text. Instead they are divided into parts and linked to one another. So that readers can read whatever part of information they require.

Ans. to Q.No.5: Online reporters can write as much as they want. That's a major plus point for them. In newspapers and magazines, writers have to cut down their stories due to space constraints. But that's not an issue for them when they write for websites. Online writing also allows reporters to give background information to their stories by way of links. They can complement their stories with information taken from other stories.

Ans. to Q.No.6: Fill in the blanks:

a) Online journalism has maximum archival capacity.
b) The major drawback of online reporting stems from its ethical constraints.
c) Most newspapers today have their own online editions.
d) Online editions eliminate publishing costs.
e) Online newspapers generate their revenue from advertising.



5.8 POSSIBLE QUESTIONS

Q.1: Discuss the ethical issues pertaining to online journalism.

Q.2: How is online journalism different from traditional journalism?

Q.3: Discuss the characteristic features of online journalism.

Q.4: Newspapers today tend to depend on their online editions for various factors. Discuss.

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UNIT-6: ONLINE NEWSPAPERS

UNIT STRUCTURE

6.1 Learning Objectives

6.2 Introduction

6.3 Online newspapers

- 6.3.1 Types of online newspapers
- 6.3.2 Growth of online newspapers

6.4 Impact of online newspapers on traditional newspapers

6.5 How to write for the web

6.6 Let us sum up

6.7 Further reading

6.8 Answers to check your progress

6.9 Possible questions

6.1 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Explain about online newspapers
- Describe the growth of online newspapers
- Discuss the impact of online newspapers on traditional newspapers
- Discuss about how to write for the online medium

6.2 INTRODUCTION

In the previous unit, we discussed the many facets of online journalism and how it has evolved over the years. In this unit, we will focus on the growth of online newspapers over the years, and how they have emerged to become one of the strongest media industries in the present times. Every major newspaper in the world has an online edition these days and without that online presence, the newspaper loses much credibility.

Even though there are several debates regarding the ethicality of online reporting and cyber journalism, its popularity and reach is beyond compare. So, being media students, it is imperative that you understand

the concept of online newspapers. Learning the ways of online journalism and understanding the difference between writing for the web and for normal print medium will make you more skilled in this upcoming field of journalism.

6.3 ONLINE NEWSPAPERS

In simple parlance, an online newspaper is a newspaper that exists on the World Wide Web. It can be the exact replica of the newspaper's printed version or it can be a separate entity on its own.

Despite all the ethical constraints facing web-based journalism, the spurt of online newspapers hasn't gone down. Traditionalists may crib and squirm at the mention of online reporting, but even they can't stop the rising popularity of this form of journalism. Every major newspaper today has its own online edition. It helps them to not only interact on a regular basis with their readers, but it has also given them the scope to challenge broadcast journalism. Newspapers could never compete with the immediacy of TV journalism, but with the help of their online editions, they can now upload breaking news as and when they happen, much like the TV channels.

6.3.1 TYPES OF ONLINE NEWSPAPERS

Online newspapers are basically those newspapers which have an online presence. But there are certain basic types of online newspapers. They are:

1. **Most major newspapers have a dual presence on the World Wide Web.** One is in the form of a news website which is updated every minute. And the other is the direct version of the printed edition uploaded on the web. For the website, they have a team of dedicated writers and reporters who only write for the web and keep updating the news round the clock.

In India, major newspapers like, The Hindustan Times (*www.hindustantimes.com*) and the Times of India (*www.timesofindia.indiatimes.com*) both have a dual presence on the web. They have websites which upload news around the clock, plus, an online version of its daily edition called the e-paper. One can go on the website

and read the exact print edition of the newspaper online. The pages from the daily edition are uploaded directly on the site. While the website is updated regularly, the online edition allows readers to check that day's edition on their computer. Sometimes, stories from the printed edition are carried on the website as well. The website editors might make certain changes if necessary.

2. **Many other newspapers have a single presence on the web.** For instance, in case of The Assam Tribune (*www.Assamtribune.com*), the news stories are the same in both the daily edition and the internet edition. They simply upload the stories from that day's edition on to their website. The website is not updated round the clock.
3. **The third type of online newspaper is the 'Online only newspaper'.** They only have a web presence and no connection with any hard-copy format. They are individual news websites with no collaboration whatsoever with any print newspaper or magazine. Rediff.com and yahoo.com are instances of news websites with no print affiliation.

Thus it can be said that most of the internet versions of newspapers and Radio and TV bulletins are something in between of these two styles of presentation.

6.3.2 GROWTH OF ONLINE NEWSPAPERS

Online newspapers do not have too long a history. It is merely over two decades old but the speed with which it has spread and grown is beyond belief. In the present times, every newspaper worth its salt has an online presence.

The first newspaper to go online was the Columbus (Ohio) Dispatch on July 1, 1980. It was brought to the users by **CompuServe.** CompuServe began working with 11 Associated Press (AP) newspapers, the first one being Columbus Dispatch, and the others being The Washington Post, The New York Times, The Minneapolis Star Tribune, The San Francisco Chronicle, The



CompuServe was the first major commercial online service in America. It dominated the market during the '80s but it later lost out to AOL which eventually took it over. CompuServe finally shut down in July 2009.

San Francisco Examiner, the Los Angeles Times, The Virginian-Pilot / Ledger Star, The Middlesex News, the St. Louis Post-Dispatch, and the Atlanta Journal-Constitution.

Right from the beginning, the online news delivery service was stated to be an experiment, and all the newspapers stopped the project by the end of 1982. It was only in the 1990s that the movement caught on. Journalists made their first tentative steps onto the Internet in 1994. In October, 1993, Florida University's journalism school launched, what is believed to be, the first journalism website on the Internet. In the United Kingdom, the electronic Telegraph is launched as the first newspaper website in November 1994.

In 1997, the BBC goes online and in less than a year it provides more than 140000 web pages of content and 61,000 pages of news. 1999 saw the launch of The Guardian Unlimited network of websites and within two years, it has more than 2 million users making it the most popular news site in the UK.

As the 21st century came closer, everyone began creating web pages and posting news on them. But 1999 saw some tense moments in the online world as there was growing panic that there would be a worldwide ripple effect which would cause all the computers to crash. But all these fears proved to be baseless as there was a smooth transition into the new century.

In February, 2000, online editors and publishers were warned to be careful of hackers as Yahoo, Amazon, CNN.com and Buy.com were all hit by hackers. In the same year, Associated Press launched the AP Streaming News, which provided multimedia content to news sites and broadcasters. Another significant event that year is seen in the redesign of the International Herald Tribune. Their new site enabled users to flick over page turns and store headlines to be viewed later.

The 9/11 attacks at the World Trade Center in New York Not only stunned the world but also led to a huge demand for online

news sites. Most of the news sites saw tremendous increase in demand as users were looking for all sorts of information online. Following this sudden surge of demand, online editors were advised to build systems that can cope with any such future rise of demand.

In July 2002, The New York Times digitised its entire archive of stories dating back to 1851. It became the first newspaper to do so. In Google 2002 launched Google News, a service that brings together the main headlines from 4000 news sites from all over the world. Google was merely providing news from all the major news sites of the world, which angered many publishers who felt that Google was merely building their own business using the content of other websites. But Google defended itself by saying that it was mutually beneficial, because, they would drive the user to the news sites directly.

The popularity of news sites reached dizzying heights as several major incidents rocked the world. The Columbia space shuttle disaster of 2003 was scooped up by the news sites because most of the newspapers went to print by the time the news came through. Even the Gulf conflict in March, 2003, led to a huge surge of online traffic as office goers logged on to the websites to track the story. According to Nielsen/Net Ratings, during the first week of the Iraq war, the number of users accessing these news sites rose by 40 %

That same year, the Wall Street Journal invested $ 28 million to redesign its website, and this new online version got 625,000 subscribers. And in May, The Times launched its first online edition.

Online newspapers have gone from strength to strength in the last few years, and it only seems to be heading towards a stronger future. Even though most news sites do not charge the users, and websites have to mostly depend on advertising revenue to maintain their websites, the number of news sites are still on a rise. The steady rise in popularity of news sites has had a major impact on all the traditional forms of journalism. The next section will deal with this aspect of online newspapers.



CHECK YOUR PROGRESS

Q.1: What is an online newspaper?

Q.2: What are the different types of online newspaper?

Q.3: The first newspaper to go online, the Columbus (Ohio) Dispatch was brought to the users by _____.

Q.4: The first journalism website on the Internet was launched by _____ journalism school.

6.4 IMPACT OF ONLINE NEWSPAPERS ON TRADITIONAL NEWSPAPERS

As you have read in the earlier section, online newspapers have gradually developed to be a major source of news and information for the public. Earlier, the most common forms of accessing news were through newspapers and magazines. Then came the radio and television. But with the advent of online newspapers, the whole scenario has changed. The print media has been the worst sufferer. It was already facing a steep challenge from the broadcast media what with live news reporting and round-the clock coverage. And now, with the emergence of online editions the traditional news mediums have had a lot more catching up to do.

In a survey conducted by The Digital Future Project, it was found that in 2008, Internet users read online newspapers for 53 minutes per week. It was 41 minutes per week in 2007. The survey also found out that 22 % online news readers had stopped their subscription to a newspaper or a magazine because they got the same information on the web. In such a scenario, it is only too evident that online newspapers are creating a huge

dent in the traditional newspaper market.

The impact of online newspapers on traditional print mediums, therefore, is pretty massive. It has forced the newspapers to think out of the box and they have had to make several changes in their functioning in order to survive in the market. Some of these changes that the newspapers have incorporated down the years are:

- Owing to rising popularity of online newspapers, traditional publishers have realised the importance of the World Wide Web. They have therefore whole heartedly embraced the concept of launching websites that promote their print mediums. As was mentioned earlier, almost every newspaper and magazine today has a website. The publishers have realised that in order to survive stiff competition, they have to resort to creating online options for their dedicated readers.
- The online newspapers have changed the way newspapers function. Newspaper editors have now realised that no news is breaking news for them. Almost every major news is scooped by both the online reporters or the TV reporters. So, most major newspapers now focus on follow-up stories. They do cover the major stories but give a full blown account of the same.
- Newspaper writers and editors now have to be more careful about how they present their stories. There has to be some edge to every story because readers have anyways read the story online or seen it on TV. The better the presentation, the more chance that it'll be read.
- Newspaper editors are now focussing more on highlighting issues rather than stressing on the news. This is the case with all major newspapers in India. They take up an issue and do a full blown story on it by talking to experts, the common men, victims etc. Two-three page full spread outs are common in most national dailies these days.
- Since most newspapers have a web presence, they use it to interact with their readers. Earlier the only way to communicate with a newspaper editor was through post and that was a long, tedious process. But now, editors can be reached through their e-mail

addresses or through the feedback column in their website. The chances of getting the editor to revert back are also very high.

- Nowadays, newspapers are not just carrying news; they are trying to cater to almost every need of a reader. Apart from the hard news and the feature stories, they have stories on relationships, entertainment, food, travel, books, films etc. They have daily supplements that try to target every age-group.
- Owing to the maximum use of Internet, most newspaper writers now need to be more technically sound. They need to know their way around computers, software and the World Wide Web.
- The newspaper reporters also have to know how to write their stories for the online version. Online writing is not similar to traditional news reporting, so writers must have the skills for both the mediums.
- Many such information which may not be regarded as 'prime' in a newspaper may be kept in the internet edition so that if anyone is interested he or she can read it.
- As we have already discussed earlier, this new phenomenon has become such an important way of life for us that any newspaper, TV and Radio news channel must have its own internet editions for allowing more and more access to its readers and masses.

These are trying times for newspapers, and the Internet is more or less responsible for it. And although publishers have themselves resorted to the Internet to get over this crisis, no one can say how far the online editions are going to support their print editions. But most academics believe that newspapers need to move decisively towards the Internet and new business models, combining the complementary aspects of both print and online, need to emerge. There is an urgent need for a judicious co-existence between the two for the years to come.

6.5 HOW TO WRITE FOR THE WEB

With the increasing popularity of online newspapers, there is also a growing demand for online news reporters. Traditional reporting differs from

online reporting, and online journalists are now a new breed. Online journalism has changed the way journalism is taught in schools. Journalism schools have started introducing courses for online news reporting because the job requirements are different. So what does it take to be an online journalist or writer? Here are some tips to write efficiently for websites:

1. Online readers have low attention span and tend to scan more and read less. And then there are the other readers who access stories through search engines. So you have to use appropriate keywords to attract this section of readers.
2. Keywords rule in the Internet world. If you want to get maximum readers make sure that you use apt keywords. Keywords tell the user and the search engines what your story is about. Search engines like Google, Yahoo etc. help users to search for news by way of keywords. For instance, if your story is about communal riots, then make sure that you use words like 'religion', 'riot', 'Hindu', 'Muslim' etc. So, when an internet user uses a search engine to look for a story on communal riots he will definitely use these terms and will be directed to your story.
3. Use the keyword in the first paragraph itself and sprinkle it all across the story. It may be difficult not to sound repetitive but you have to make your point obvious.
4. Put a hyperlink to your home site in the first paragraph.
5. The headline is also an important part of your news story. To attract the readers, use catchy headlines, something that will not let their interest stray. To attract search engines to your story, use keywords in your headline and keep them in the front. For eg, if your keyword is "value based education", don't use a headline, "Amrit Mathur's seminar on value based education." Instead say, "Value based education seminar by Amrit Mathur". You may be using the passive voice but your keyword is getting top positioning.
6. Be it online reporting or traditional writing, news reporting requires a particular style. Be creative, but do not lose objectivity. It shouldn't be biased and without any hype.

7. Do not push your product. Although you wish to sell your idea or product, do not let that become evident in your writing. Your aim should be to inform not persuade. The best way to do so is to mention the problem and then to put up your idea as the solution for the problem.
8. Try to emphasise on what's different about your story. Unique and controversial stories receive maximum attention.
9. Use personal stories as references. Mention people and real life incidents. Readers love to read human interest stories and it also authenticates your story.
10. To support your idea, you may use quotes. But do ensure that proper permission is taken before you do so.
11. Inverse pyramid style works. Give the most important information in the first paragraph. Elaborate later but don't forget to reinstate the main point in the last paragraph again.
12. Use active voice and strong verbs to make your story sound important and immediate.
13. Do not use unnecessary words. Make sure that every word counts. Reread the story after you have written it, and delete the unnecessary words. Be as precise as possible.
14. Write in third person. Avoid superlatives and exclamation points. They'll make your story less credible.
15. Keep the paragraphs short and provide ample space between them. This helps online readability and keeps the readers' attention.
16. Keep the headlines short. If you want to put more information into the headline, use a sub heading.
17. Most websites demand a small introduction to your story. Keep it four sentences or less, and these lines may help you get a reader or get him off the site. So make sure you use the right words to intrigue the reader, but don't give away the story.
18. Take necessary steps to eliminate mistakes. Check and cross check your story before uploading it on the site. Write out the story on a word document first to eliminate any typing errors. Even a wrong spelling will make you lose your credibility.

19. Let someone else read it once. A fresh perspective helps catch mistakes, and also to ensure that the story makes sense.
20. And, authenticity is definitely the end word for this version of journalism also. Put maximum emphasis upon it as there is an impression that online version of journalism may contain un-authentic information.



LET US KNOW

BLOG: A blog is the short form for "weblog", a term used to describe a website which chronicles on-going information about a person. A blog is frequently updated by information on day-to-day happenings or whatever interests the writer of the blog. They are mostly personal diaries maintained by individuals or a group of individuals who wish to express their opinion about a wide range of subjects. A blog will contain text, pictures, videos and links to other sites as well.

Blogs are like personal diaries, but the diary keeper here is interested in letting his thoughts known to others. Many individuals have started blogging nowadays, and it has become a potent means of expressing one's opinion. And, in some cases these personal opinions may not be correct in the wider context. But there is no way to stop people to write on their blogs, although several litigations have been filed by people against blog writers.

Nowadays, most celebrities in India maintain their personal blogs. Amitabh Bachchan and Aamir Khan are two such stars. Their blogs are very popular and manage to attract a lot of readership.

Its biggest advantage is that anyone interested in it can start a blog and spread his or her views and ideas across the world stage.



CHECK YOUR PROGRESS

Q.5: What is the importance of keywords in writing for the web?

Q.6: Why is it necessary to keep paragraphs short and put in ample space between paragraphs?

Q.7: Write true or false:

a. Inverse pyramid style is best suited for web writing. (T/F)

b. Use passive voice and weak verbs to make your story sound important and immediate. (T/F)

c. Keep the headlines short. (T/F)



ACTIVITY - A

1. Visit a newspaper office and talk to an online writer. Find out the difference in writing for the print medium and online medium.
2. Check the search engines like Google and Yahoo for information on 'online journalism'. Try putting in different keywords and read the stories which appear on the first page of the search engine. See how the writer has used the keywords in the story.
3. Read the web versions of the Times of India or the Hindustan Times and find out one story which has been carried in both the website and the e-paper. Now spot the difference in the style of writing.



6.6 LET US SUM UP

- Online newspapers are newspapers that are present only on the World Wide Web.
- Online newspapers are basically of three types.
- News websites which only have stories taken from the printed edition is one type of online newspaper. Eg: The Assam Tribune.
- Some newspaper publications have two online versions – one is the e-paper which is the exact replica of a particular day's edition, the other is the formal website which has up-to-date news being uploaded round the clock. Most major newspapers have both the versions available online. Eg: Times of India, Hindustan Times.
- The concept of online newspapers is a relatively new concept. The first online newspaper was the Columbus Dispatch, the online version of which was launched on July 1, 1980.
- It was followed by ten other newspapers, which went online with the help of the CompuServe Information Service.
- Although the system of going online started in the 1980s, it was only in the '90s that the trend caught on.
- The '90s saw several newspapers around the world going online. And, as the 21st century approached, every small and big organisation started creating web pages and uploading them. Newspaper publishers were not behind either.
- But around the turn of the century, fears about the ripple effect arose, and everyone started dreading the new millennium expecting a total crash of computer systems all over the world. But nothing of that sort happened.
- The online bug caught many other publications and news websites became the most popular sites on the web. So much so that, traditional newspapers were in danger of being wiped out.
- Newspaper publishers realised that it would be foolish to fight with the online genre and decided to use this domain to promote their

supposedly dying print editions. Newspapers, therefore, have gradually assimilated the Internet editions into their functioning and have tried to make use of its influence and popularity to further their cause.

- As more and more traditional newspapers have launched their online editions, there has been an obvious impact on the workings of the print version. To keep up with the popularity of their online versions, traditional newspapers have had to introduce newer ways to keep their loyal readers and to attract new readers.
- Newspaper editors have realised that they can hardly break any news any longer. Their online competitors have the right platform to upload breaking news as and when they happen. So, newspapers now resort to doing follow-up stories of major news. Stories which are more detailed are well researched. They go beyond the news itself to provide more information about the same.
- Even the presentation matters a lot. Most of the stories are already out, so the editors need to find a new angle to the story.
- Newspapers now focus on one particular issue and try to make a total package story with expert comments, background information, past instances etc. They concentrate on a well-rounded feature story so that readers get something new to read.
- Online editions provide the reader with an opportunity to interact with the editors of the print edition.
- Newspaper writers need to have computer skills and, they also need to know the basics about writing for the web.
- Online writing demands a unique skill and one should be prepared to counter the skill before plunging into this domain.
- Keywords, hyperlinks, proper headlines are the things one should focus on while writing for the web.
- Blogging is one of the most recent forms of online writing. Common people, celebrities and even journalists have become prone to blogging on their own websites.
- Blogging allows one to express oneself freely.



6.7 FURTHER READINGS

1. **Digital Media, Building the Global Audience** – *T K Ganesh (Gnosis Publishers, New Delhi)*.
2. **Impact of Internet on Journalism** – *Arun Bhatia (Akansha Publishing House, New Delhi)*.
3. **Net, Media and Mass Communication** – *Jagadish Chakraborty (Authors Press, New Delhi).*



6.8 ANSWERS TO CHECK YOUR PROGRESS

Ans. to Q.No.1: An online newspaper is a newspaper that exists on the World Wide Web. It can be the exact replica of the newspaper's printed version, or it can be a separate entity on its own.

Ans. to Q.No.2: The different types of online newspaper are:

a. Online newspapers having dual presence on the World Wide Web.
b. Online newspapers having single presence on the web.
c. Online only newspaper

Ans. to Q.No.3: CompuServe.

Ans. to Q.No.4: Florida University

Ans. to Q.No.5: Online readers have low attention span, and tend to scan more and read less. And then there are the other readers who access stories through search engines. So, you have to use appropriate keywords to attract this section of readers.

Ans. to Q.No.6: It is necessary to keep the paragraphs short and provide ample space between them as this helps online readability, and keeps the readers' attention.

Ans. to Q.No.7: a. True, b. False, c. True



6.9 POSSIBLE QUESTIONS

Q.1: Why have online newspapers become so popular? Discuss in detail.

Q.2: How is online writing different from traditional reporting?

Q.3: Why are 'keywords' such an important aspect of online writing?

Q.4: Discuss the impact of online newspapers on traditional newspapers.

Q.5: Discuss how online journalism has brought in a revolutionary change in the world of news presentation in the modern day world.

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