

Block

2

INTERNET OPPORTUNITIES AND CHALLENGES

UNIT 5

Uses of Interactive Multimedia Tools

UNIT 6

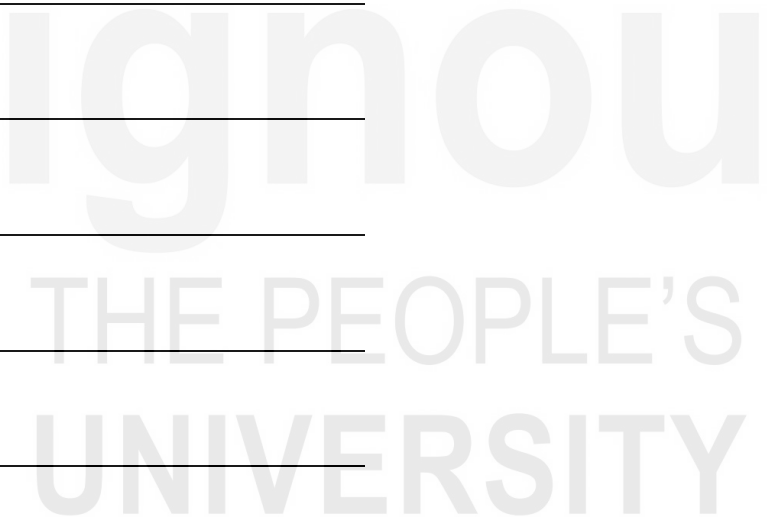
Young People in the Virtual World

UNIT 7

Challenges and Risks in the Virtual World

UNIT 8

Promotion of Alternative Media





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BLOCK 2 INTRODUCTION

After you learn about the critical analysis of media contents in the first Block, let us move on to the contemporary digital media system. In this Block, you will understand the specific application side of information and Communication Technology (ICT) based digital platforms. Its uniqueness, usefulness, resourcefulness, etc., are explored deeply in this Block.

Unit 5: Uses of Interactive Multimedia Tools. In today's digital age, learning is evolving rapidly, introducing innovative tools and platforms. This module explores interactive multimedia technologies, comprehensively understanding their significance and applications. We'll explore interactivity, exploring its levels and manifestations within multimedia contexts. We'll navigate through various interactive learning formats, from text to audio, video, and graphics, each offering unique engagement opportunities. Additionally, we'll examine free and open-source software for content creation and explore integrating digital games into education, distinguishing between educational and entertainment games. You will grasp interactive multimedia's role in learning and its potential for societal impact.

Unit 6: Young People in the Virtual World. Communication technologies have revolutionised human civilisation throughout history, fostering increased literacy and immersive experiences. From Plato's concerns about the influence of theatre to modern debates on online safety, we explore the growth and expense of the virtual world. This Unit explores its impact on generational learning, the emergence of digital natives, and the participatory culture it fosters. We examine the dichotomy between the real and virtual realms, navigating the complexities of simulation-based games. Despite risks, the virtual world offers invaluable education, healthcare, and many more opportunities.

Unit 7: Challenges and Risks in the Virtual World. Before exploring cyber security, it's essential to grasp the essence of 'cyberspace'. Coined by William Gibson, it represents a virtual realm where digital interactions occur beyond physical boundaries. Understanding cyberspace's intricacies is pivotal as we navigate evolving threats. From hacking to cyberstalking, the challenges in securing cyberspace are multifaceted. You will understand the cyber security concept, emphasising the need for robust defences and legal frameworks. By discerning between computer-related and facilitated crimes, you'll acquire insights crucial for safeguarding digital assets in an interconnected world.

Unit 8: Promotion of Alternative Media. In this Unit, we explore the transformative impact of digital technology on media communication. As traditional media evolves into interactive platforms, alternative media emerges as a beacon of inclusivity and participatory democracy. Enabled by internet-enabled smartphones and social media, users engage in two-way communication, creating and sharing diverse content. Yet, disparities persist, hindering access for marginalised communities. Throughout this Unit, we will understand the essence of alternative media, its necessity, forms, and

challenges. We critically assess ownership, content creation, audience engagement, and sustainability.

Cyberspace provides immense opportunities for its users. Unlike other mainstream media, digital media facilitates interactivity to engage with a wide range of audiences and subjects. As a responsible digital citizen, you must engage with this medium productively. For that, this Block would give an orientation.



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UNIT 5 USES OF INTERACTIVE MULTIMEDIA TOOLS

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5.0 INTRODUCTION

Learning in the digital-networked space has opened up many innovative tools and spaces. Interactive multimedia technologies are immersive, activate the user, and sustain the interest and curiosity to learn, play, and apply knowledge.

5.1 LEARNING OUTCOMES

After completing this unit, you should be able to:

- Understand the definition and nature of interactivity;
- Acquire knowledge on interactive multimedia formats for learning;
- Familiar with the open-source software for creating e-content and learning; and
- Learn the user of games for social change through learning.

5.2 INTERACTIVITY

The convergence between new technologies and the Internet has led to the unprecedented communications revolution in the twenty-first century. Interactivity has become the main adjective of this world and the media landscape. Scholars have identified that interactivity is the interweave between three elements in communication: source, medium, and message. Despite no consensus on the definition of interactivity, some scholars identify it as "most effective if a high level of interactivity between participants is involved". (Koolstra and Bos, 2011, p. 207)

Finding a comprehensive definition for the term interactivity is challenging due to the overlap with many fields; for instance, some scholars identify interactivity from a communication angle, technology, education, etc.

Furthermore, Quiring and Schweiger (2008) indicate that the term "interactivity" is derived from sociology and computer sciences, while communication science borrowed the term in the late 1980s to be used in communication studies. However, nowadays, interactivity is a common expression in the age of social media and the Internet.

In addition, Jankins (2006) distinguishes between interactivity and participation: "Interactivity refers to the ways that new technologies have been designed to be more responsive to consumer feedback." (p. 133), while participation "is shaped by the cultural and social protocols." (p. 133).

5.2.1 Levels of Interactivity

The measure of interactivity is considered challenging because there is no consensus on its definition, and it overlaps with various sciences. Thus, the levels of interactivity are not fixed due to their connection with other knowledge. This section attempts to identify the different levels of interactivity in the context of media and education.

Koolstra and Bos (2011) identify the levels of interactivity as interactive, with several elements such as synchronicity, timing flexibility, control over the content, number of participants, physical presence, use of sight, use of hearing, and use of other senses.

The first level is a maximum score of interactivity, which refers to the use of a set of senses during the communication process, for instance, the use of hearing, use of sight, as well as interaction with other elements such as timing flexibility, control over the content, and the number of participants. Face-to-face communication is considered one of the levels of interactivity through interacting with the many senses, such as touch or smell.

In the age of convergence blogs, online chats, and watching video clips with education, the levels of interactivity are different. Salmon (2002) identified five levels of interactivity for e-learning:

1. access and motivation,
2. online socialisation,

3. information exchange,
4. knowledge construction
5. development.

5.2.2 Interactive Learning

Whereas interactivity term in learning refers to the merits or interaction level of the media. It's a dynamic activity between the learning elements and the medium.

Researchers identify the types of interaction in learning into five kinds of interactivity (Bannan-Ritland, 2002; Northrup, 2002), which are designed to develop the process of learning and to obtain knowledge:

1. **Learner:** content interaction: Learners gain awareness by learning from the content of lectures, which are systematically arranged and redesigned to obtain effective teaching.
2. **Learner:** interface interaction refers to the interaction between the interface and the human element that emerges when interacting with new technologies.
3. **Learner-instructor** interaction refers to the relationship between learners and teachers who are aware of the use of new technologies in the learning process.
4. **Learner** interaction refers to discussions between learners and teachers, which allow both to share their thoughts through interactive technology. This results in efficiency in learning by enriching the dialogue and information exchange.
5. **Learner:** self-interaction encourages learners to expose, investigate, and build awareness through interactive technology.

5.2.3 Interactivity in Multimedia

A kind of communication known as "interactive media" is one in which the value of the output is dependent on the value of the input. It allows users to control, integrate, and alter many different types of media, such as text, computer graphics, audio, video, and animations. This course examines the conceptual design of interaction, new media, interactivity, human-computer interaction, graphical user interfaces, digital culture, interaction design, and virtual reality. The integration of many information technologies is what makes interactive multimedia possible. These technologies include computers, data storage, telephones, and televisions. Examples of interactive multimedia Applications include video games, electronic encyclopaedias, travel guides, and educational and training programmes.

Oliver Quiring and Wolfgang Schweiger (2008) argue interactivity is "a process of inter-human communication via technical means." Hence, the technical part is crucial for interactivity.

They argue two types of interactivity:

1. User-User interactivity
2. User-System interactivity

However, developers generate the algorithm and content of the system. Hence, user-system interactivity is user-developer communication. User-user interactivity also happens between the user and the developer. Therefore, it takes place between human beings.

They propose three levels of interactivity:-

1. Action
2. Evaluation of the situation
3. Exchange of meaning

Here, evaluating the situation has a crucial impact on action and the exchange of meaning.

Check Your Progress: 1

Notes: 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this unit

1. Define interactivity. Provide examples of interactive platforms.

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2. What are the two types of interactivity?

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3. Explain the levels of interactivity.

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4. Name five types of interactive learning.

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5.3 INTERACTIVE MULTIMEDIA LEARNING FORMATS

The emerging multimedia platforms are dynamic and require "updates" to provide more security and stability for the content and to suit various digital platforms. It is important to understand them separately, which helps them to study converged media content. The elements of multimedia provide the learner with a more immersive experience. The file formats are now numerous and ever-emerging, but the cloud-based content made it possible to make the text, audio, video, animation and graphics interactive and seamlessly networked.

5.3.1 Text

Education technology software enables static text to become interactive e-text, which helps learning more interesting and fun and improves cognitive skills. Massive open learning, as well as other e-learning processes, along with audio-video e-text, plays an important role. While reading the text, the user can hyperlink relevant information for further reading. The text colour also plays an important role in communication with the learner. Colouring key terms and providing a pop-up-enabled brief meaning or explanation will help the learner remember and understand the meaning. The text audio reader is another interactive option that will help users who are not native English speakers. The audio-enabled text (difficult words) will enhance the user's pronunciation. It can be done using cloud-based text platforms like Google Documents, word documents on OneDrive, etc. A plain Word document linked to an online web page can also be converged with the above-discussed interactions. Some of the software is www.activelylearn.com, where you can also add interactive questions for the learners while they read the e-text, including short answers and multiple choice questions. It also conducts polls. PDF documents using software like Adobe Acrobat Reader, Foxit Reader, Libre Office, Inkscape, etc., will help add notes and annotations and highlight the text in PDF documents.

Text-based content creates Doodles, Whiteboard animations, and word clouds. Word clouds are one tool used to use keywords in a study to create and highlight the most appropriate and popular terms among other text through a graphics or interactive text format.

5.3.2 Audio

Smart learning is enabled with Artificial intelligence-based communication systems like Amazon 'Alexa', Google Nest 'Mini', driving directions in maps, etc. The voice commands help navigate content and control smart gadgets. Learning with Alexa or Google Mini provided an immense opportunity not only for people who are blind but also for users who would be learning through questions, playing quizzes and other interactive tools. The digital version of newspapers on mobile applications and websites is enabled with the screen reader, where you can listen to the audio version of the content.

The Indian Institute of Technology offers online courses through its popular

NPTEL platform. It offers learners video, e-text, and audio formats of the lecture for download. In digital learning, audio has gained more importance as it engages users while doing other work (for example, travelling on a metro rail). Indeed, we often listen to important speaker videos on YouTube rather than watch them. Audio lectures have great potential to engage the audience's aural senses.

Podcasting is another emerging area where teachers, enthusiasts, and skilled people share their expertise with the desired audiences. Ted Talks are one of the most popular series available in both video and audio formats. Learning a language requires the correct pronunciation of words. Audiobooks and audio lectures are effective ways of learning the art of language.

Sound can help with motivation and focus, according to an evaluation of audio interaction. The blind students could distinguish noises with ease. Visually impaired students can feel spatiality and immersion in AudioChile, a virtual environment with 3D sound. (Sanchez, Saenz, pg. year) For those who are blind, the field of assistive technology can be highly complex and can be seen from various angles. Some of these technological advancements for blind people include smartphone-based assistive technology like Carnegie Mellon University's smartphone-based Trinetra project, which enables blind people to scan product barcodes independently; StopInfo, which provides detailed information about bus stops to blind riders, and the display reader, which enables blind people to access household appliance displays. Project Ray 4, GeorgiePhone, MIT Fifth Sense, and the portable OrCam, which has features for people who are blind and use just speech and touch, are notable advancements.

5.3.3 Video

Interactive multimedia allows learners to deliver a reaction to an online sequence and receive a response as a result of the input. In comparison, traditional videos do not offer any interactivity apart from pause and play. Interactive video is an innovative and exciting form of media that transforms video from its traditional image. Big brands worldwide spend more today to engage with their customers online via interactive videos. These brands have achieved great success as the online viewing and buying experience is more experiential. By definition, interactive videos are videos where the audience participates in the viewing experience. Unlike old-fashioned linear videos, interactive videos are not for inactive viewing; on the contrary, they incite the viewer to engage candidly with them for a more immersive experience. Though the technology behind such videos is still comparatively recent, more and more advertisers and content producers are starting to embrace it. Mobile Marketer, a U.S.-based firm, mentions in one of its recent findings that there is a forty-seven per cent increase of interest noted on average through interactive videos. Studies also specify a nine times increase in intent by a purchaser while browsing interactive videos as they provide an immersive shopping experience online. For example, a brand called Ted Bakers has online videos where viewers can purchase clothes showcased on in-action models appearing in an advertisement. In addition to e-commerce videos, interactive videos are now common for product demos, storytelling data

capture and e-learning. Life Saver, for example, uses interactive elements to create an educational video that helps his viewers learn about saving lives while practising their decision-making ability.

Interactive videos are produced by marking hotspots, which are clickable areas. When a hotspot is clicked, it leads to an action, such as more information being shown. There are two types of hotspots; the first is a static hotspot, an area in the frame that is static throughout the video. The second one is a sticky hotspot, an area anchored to move along people or objects as they move in the video, creating more engagement with the viewer. Another element of interactive videos is overlays or inset frames that appear when a hotspot is clicked on. These overlays review additional information after a keyword or a hotspot is clicked. Overlays often lead to external websites and downloadable content. The third most common element of interactive videos is branching; a frame where you get two options to choose from provides the audience with a more personalised giving experience. Another important and growing phenomenon in real estate, travel and e-commerce is 360° interactive videos. Such videos allow the viewer to scroll in any direction across the space, giving a three-dimensional image by changing the viewing angle for an immersive experience.

Mapping the course through which one will experience the video and the elements within the video is the pre-production for making interactive videos. Another common practice in making interactive videos is scripting how the branching or anchoring elements will roll out during the video and then preparing the content for each overlay or branch. Wirewax, Hapyak, and Rapt are some popular interactive video editing platforms available, apart from many developing applications that can be used on a smartphone.

5.3.4 Graphics and Animation

"Ek thithali anek thithali" is one of the first animated songs to reach large audiences in India and discuss unity and diversity on India's national television, "Door Darshan." Animation and graphics make learning fun and interactive, with users' or learners' participation. Animation can be used to learn maths, science, moral science, ethics, and other behavioural training.

Complex concepts, such as the anatomy of the human body, heart functioning, space, etc., can be visualised and made interactive through animation. Virtual, augmented, and mixed-reality immersive content makes the learners' experience more realistic and effective.

5.4 INTERACTIVE MULTIMEDIA SOFTWARE

The modern learning, communicating, or marketing age is widely based on multimedia-based resources. It improves the effectiveness and efficiency of learning by engaging students at a deeper level than may otherwise be possible. Not only for learning, but it has completely changed audio and visual experiences overall in day-to-day life. Multimedia software packages add effects to amateur mobile camera shoots.

Some are built into social media platforms like Facebook, Instagram, and Twitter. These platforms offer not only colour correction and the addition of text but also animated graphic effects, audio, and image transitions. Facebook provides an automated collage of visual memories by organising images and videos with suitable music.

Interactive Multimedia Software (IMS) has bridged the gap between "real world" phenomena and their processes. The software package includes text, drawings, photographs, video clips, music, narration, animation, and simulation. The best feature of IMS is that many participants can communicate simultaneously with control. Interactive multimedia technologies can represent ideas in almost any mediated form. It gives opportunities for higher levels of engagement, improves representation and enhances inclusivity. We can say IMS provides a proper "democratic environment" of interaction. Students and the "cognitive tools" are two. The important bases of this technology are utilised by "intellectual partners" in the learning process. It creates many interactions between the partners.

There are various multimedia software available in the technology market. Some are built with internet media platforms, some are available without payment, called open source software (OSS), and some are paid. We learned about built-in software earlier in this lesson. Open-source software is the most popular form of IMS. Students, teachers, the general public, and even early professionals use it. In contrast, paid IMS is mainly used by professionals, media houses, institutions, and high-end users.

5.4.1 Free and Open Source Software

Software for content creation for educational purposes is expensive due to the cost of the licence. The copyleft movement and free and open-source software brought together like-minded professionals to create royalty-free software. This has not only helped in education but also many other fields.

Open source software (OSS) is called free software because it is copyright-free, and anyone can use it. So many OSS are available online and otherwise ready to create content. You can download and use it. However, many open-source software leave their trademark on the completed piece. Here, we list the ten most popular open-source multimedia software.

GitHub is one of the primary sources of free and open-source software. Some of these initiatives started at MIT and other individual and group efforts. To name a few, I like Linux, GNU, UNIX, etc. The software includes learning management systems like www.moodle.org, which various universities have adopted. Moodle is enabled with assessment systems like quizzes, interactive videos, on-demand lectures, live streaming, etc. Software platforms like www.h5p.org provide interactive layers of assessment on the videos to encourage learners to play with the content-based assessment while watching the videos. Geogebra(www.geogebra.org) is another interesting software for learning mathematics available on multiple platforms and in augmented reality format.

Developing e-content can be done with the help of the following software during video and audio content post-production. For mobile phones, VidCutter, Shotcut, Kinemaster, Open camera, etc. For video editing on a desktop, one may use OpenShot, Avidemux, Blender (visual effects and animation), Cinelerra Infinity, Flowblade, Kdenlive, etc.

5.4.2 Interactive Multimedia Tools for Content Creation

Content marketing companies have realised that interactive content plays an important role. It has become the best way to get the audience's attention and

I understand the target audience. Artificial intelligence has impacted behaviour patterns and ways of thinking. Interactive content has massive potential for virality, generating shares, comments, likes, and other social media actions that lead to developing organic traffic.

There are many tools for generating interactive content. Some are designed for ready-to-use, while some need to be adjusted for desired content creation. Here, we are giving information about a few tools for creating interactive content.

1. **Ion Interactive:** This tool makes it easy to create interactive content, such as e-books, landing pages, quizzes, lookbooks, calculators, etc.
2. **Contentools** is a well-known tool available on the market. It allows you to create both static and dynamic content and provides materials for generating leads.
3. **SurveyMonkey:** One of the best tools for creating surveys, quizzes, tests and data-based communication.
4. **MapMe** creates interactive maps. Companies frequently use this tool for map-based marketing strategies.
5. **Playbuzz:** It gives many options for content creation and is widely used to create community-based content. It also provides user data and metrics.

There are several interactive platforms for conducting Quizzes with instant results and ranking. To mention a few, they include Kahoot, Big Button, Mentimeter, Hotpotatos, etc. They are also used for feedback.

It is easy and quick to make whiteboard animation, where you can provide a visual and textual description of a concept, definition, or formula. The software available is Video Scribe, Powtoons, and Google Doodle. Canva is one of the most popular software platforms for creating interactive presentations, videos, posters, intro materials, etc.

Video editing has been one of the important parts of e-content preparation. Free software like Openshot and Davinci Resolve help in video editing, while Bensound and YouTube audio for royalty-free music and Pixabay (audio-visual content free), pixels, freepik, etc. are for images, graphics and animations.

Production with mobile phones has come in handy, and several applications help learners and teachers at various levels develop media content—for example, Open Camera for Shooting, Inshot, Cinema Fv5, Kinemaster, and Animaker.

Animation used to be expensive and highly skilled. Now, the learner can use free and open software with all its potential features. They include Animaker, Blender, Nuke, K-3D, Opentoonz etc. Among many other software, 'Handbrake' is used for video compression for multiple digital platforms.

Check Your Progress: 2

Notes: 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this unit

1. What do you understand about free and open-source software?

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2. Explain the importance of creative commons in digital learning environments?

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5.5 DIGITAL GAMES IN THE CLASSROOM

In the classroom, playing games is one of the most effective strategies to keep pupils' attention. Historically, various games may be played, each of which is distinguished from the others in terms of culture and location. Several games are played across a variety of very similar cultures. There are several categories of games, including board games, real-world games, role-playing games, and others. In addition, the number of participants is another factor that can be used to classify these games. Games create an environment in which involvement is encouraged, and discourse contributes to the growth of a person's personality on both the physical and mental levels.

Game design has also innovated with more interactivity and immersive user participation as technology advances. Digital games with well-lit screens, captivating graphics, and real-life interactivity provide a magical feeling to the users. Several games are designed not just for entertainment but for edutainment. Games for behavioural change are designed for specific purposes to address issues like mental health, learning, trauma, learning maths, etc.

5.5.1 Educational Games vs Entertainment Games

Educational games are different from entertainment games. Educational games aim to improve the cognitive levels of learners, focusing on skills like computing, maths, reasoning, etc. Sometimes, issues like gender sensitivity, familiarity with cultural ethos, language, grammar, and problem-solving are the focal themes.

According to Prensky (2006, p. 4), "Kids learn more positive, useful things for their future from video games than they learn in school." Video is more powerful, and one can re-play, unlike a one-time lecture in the class. This does not undermine the physical classroom teaching-learning model, but maps, drawing, word games, pre-numeric, and cognitive learning help improve their skills. Gee (2007, p. 10) supports gaming by saying, "Good games are problem-solving spaces that create deep learning." It helps with quick thinking, memory, and critical thinking, and learners can explore more possibilities of solving an issue.

On the other hand, entertainment games aim to provide pleasure and experience to the users or players in unrealistic situations. For example, in racing games, where hardly any traffic rules matter, the concept of an accident is not there. As soon as it gets a fatal crash, vehicles reappear, unlike in real life. Not only that, gun games push the user to more violence and inappropriate behaviour.

5.5.2 Digital Games for Instruction and Learning

Through play, repetition and discovery become two crucial parts of learning. Many students have a "sweet spot" for gaming, which makes gaming in education successful in concept acquisition, whereas book use can be more challenging. Through play, students may not even realise they are learning. There is a demand for innovation in the gaming industry. Unexpected occurrences and difficult decisions enable the gamer to continue playing.

Including a story or narrative in a game can significantly engage the player. This enables constant feedback and challenges at the appropriate difficulty level while preventing frustration.

Games provide a framework for problem-solving. This allows a player to "fail," meaning that a combination of hard, enjoyable, and identity-building motivates the learner to persist until the challenge is finished. This is a fruitless endeavour. Success may take some time to achieve, but growth is constant, and so is the knowledge needed to solve the problem.

Games should be blended with educational objectives. For learning to occur, actions within the game must be relevant to life outside the game. Contrary to the concepts of practice and practice, games should choose an approach that simplifies the game and restricts the scope of knowledge. For a player to be successful in the game, the subject matter that must be taught through the game should be the value of knowing the relevant information. To demonstrate achievement in student learning, games must possess specific characteristics. The game should be as convincing as feasible and

challenging. The game's core activity should be participatory and engaging for the pupils. Games are about decision-making, where you observe the outcomes and receive feedback. The outcome necessitates originality and innovation for a work to perform properly and run successfully. Games teach pupils about rewards and the effort required to obtain them. To advance in the game, the player must master the learning goals and objectives underlying the game.

Integration, motivation, and concentration are the three components to consider while building strong and successful games. Focus is most effective when investigating, operating, or interacting while learning.

5.5.3 Game for Change

Mayer, R. E. (2019). asserts that “game-based learning is methodologically sound, theoretically grounded, and educationally relevant.” Games are expressions of play which allow people to go beyond instant imagination and direct activity. Games are like ice-breaking activities conducted in a way that can be an effective tool for community participation and creating a dialogue between players. McKee et al. (1998) describe games that can enhance participatory processes discreetly placed in the learning process. It helps people to reflect, relax, energise, bring a sense of interest, create humour, "grab people in the gut", feel emotions, and induce meditation. They provide diversity, discovery and surprise through various play methods, thus keeping players involved. It triggers both sides of the brain - cognitive, logical, and emotional, creative. It stimulates perception, affection or expression, creating interest by demonstrating a thought-provoking situation. Games are expressions of play which allow people to go beyond instant imagination and direct activity. The striving point in any game is the sense of accomplishment when the players get rewards and appreciation, and different strategies are adopted to win any game. Feedback is an important component of any game, which motivates the player to play till the end. Games offer the ability to "try on" different identities and customise them with little risk of failure. A game plays an important role in the ability to earn one's own identity. (Stokes, Seggerman, Rejeski, 2007). Games play an imperative role in the lives of young people.

5.5.4 Digital Games for Awareness and Advocacy of Issues

Nowadays, digital games are used mostly to promote positive behaviours such as hand washing, maintaining hygiene, eating nutritious food, etc. Digital games also help in providing cognitive learning for the participants. Organising different group and individual activities helps in emotional and cognitive learning. Digital games are more interesting as learners/participants gain knowledge by participating in the activity through entertainment. We can use audio and video, which helps the participant/ learner get knowledge through entertainment.

Digital games also help improve learning behaviour and attitudes towards positive behaviour. Participants/learners can encounter different issues and learn how to solve them using different methods, such as digital games. For

example, an HIV/AIDS counsellor can learn different counselling techniques to counsel High-Risk Groups like Truck drivers, Migrant labourers, Transgenders, etc.

Digital games are also economically viable. For example, a participant/learner can get training using an Android phone, Zoom, Microsoft Training, etc., whereas classroom training costs more than digital training. A trainer can provide training from anywhere, and simultaneously, a participant can get an education through different activities and games.

Digital games or communication empower participants/learners to share their experiences without hesitance, which helps them gain knowledge and overcome different barriers to their professional work.

Digital games help learners use creative skills by involving different group activities. For example, presentations promote different health behaviours among target people and their methods. Digital games are helpful as participants/learners can learn from different activities using posters, art, and descriptions. It's useful for the learner to get close to the issues.

Check Your Progress: 3

Notes: 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this unit

1. Explain the difference between educational and entertainment games.

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2. Enumerate the role of games in digital learning environments?

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5.6 LET US SUM UP

As we conclude Unit 5, we've explored the vibrant landscape of interactive multimedia tools. From understanding the essence of interactivity to exploring diverse multimedia formats, we've learnt how these technologies can revolutionise the learning experience. We also learnt about open-source software and tools to create engaging e-content. In summary, this unit has given an outline of the transformative potential of interactive multimedia in education. The digital learning environment is a new emerging teaching-

learning process; the knowledge of having a better understanding of this platform would give a higher leverage to harness the potential for better learning.

5.7 FURTHER READINGS

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5.8 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

Check Your Progress: 1

1. Interactivity Definition and Examples: Interactivity refers to the dynamic engagement between users and digital content, enabling communication or manipulation. Examples include social media platforms like Facebook and Twitter, where users interact by posting, liking, and commenting. Additionally, interactive websites feature elements such as quizzes or games, allowing users to actively participate in the content they consume.
2. Two Types of Interactivity: Interactivity encompasses user-to-user interactions, like those found on social media platforms, where users communicate with each other. Meanwhile, user-to-system interactions involve users interacting with a system or interface, such as engaging with an online shopping platform or playing a video game.
3. Levels of Interactivity Explanation: Interactivity spans various levels, from basic navigation to immersive experiences. These levels include exploratory interactivity (simple navigation), adaptive interactivity (personalised content), conversational interactivity (real-time communication), and immersive interactivity (virtual reality).

4. Types of Interactive Learning: Interactive learning methods include simulations (virtual labs), gamification (learning through games), collaborative platforms (wikis, forums), interactive videos (with quizzes or branching scenarios), and virtual classrooms (live online sessions with interactive tools).

Check Your Progress: 2

1. Free and open-source software (FOSS) refers to programs whose source code is freely available for anyone to study, modify, and distribute. FOSS fosters collaboration, innovation, and transparency in software development. Users benefit from cost-effectiveness, customization, and community support. Examples include Linux operating systems and the LibreOffice suite.
2. Creative Commons (CC) licences enable creators to share their work with specific permissions while retaining copyright. In digital learning environments, CC licences facilitate access to a vast array of educational resources, allowing educators and learners to reuse, remix, and redistribute content legally. This promotes innovation, collaboration, and inclusivity by breaking down barriers to knowledge sharing and fostering a culture of open education.

Check Your Progress: 3

1. Educational games focus on imparting knowledge, skills, or concepts while entertainment games prioritise amusement and enjoyment. Educational games often incorporate learning objectives and assessments, whereas entertainment games prioritise gameplay experience. Additionally, educational games are designed with instructional strategies to facilitate learning, while entertainment games may not have explicit educational goals.
2. Games in digital learning environments serve various roles:
 - Facilitate active learning through interactive experiences.
 - Enhance engagement and motivation by providing immediate feedback and rewards.
 - Support personalised learning experiences through adaptive algorithms.
 - Foster collaboration and social interaction among learners.
 - Develop critical thinking, problem-solving, and decision-making skills.
 - Enable learners to explore complex concepts in a safe and immersive environment.
 - Offer opportunities for assessment and progress tracking.
 - Promote creativity and innovation through game-based challenges and simulations.

UNIT 6 YOUNG PEOPLE IN THE VIRTUAL WORLD

Structure

- 6.0 Introduction
- 6.1 Learning Outcomes
- 6.2 The Growth and Expense of the Virtual World
- 6.3 Technology's Generational Impact
- 6.4 The Generation Alpha
- 6.5 Digital Natives
- 6.6 The Two Worlds: The Real and the Virtual
- 6.7 Simulation-Based Games
- 6.8 The Participatory Culture of the Virtual World
- 6.9 Let Us Sum Up
- 6.10 Further Readings
- 6.11 Check Your Progress: Possible Answers

6.0 INTRODUCTION

In the history of communication, technologies have proved to be turning points in deciding the course of human civilisations. Whether it was the writing systems of Egyptians, Greeks, Romans, Chinese or Indians, it paved the way for human progression. The inventions of the printing press, followed by telegram, radio, television and now the Internet, have transformed the communication mechanism as never before. If one looks at the technological development of these communication systems closely, one realises two very distinctive features. It has progressively made the technologies available to the masses with increased literacy; second, it has provided users with a participatory and immersive experience. While it has been the cause and effect of increased literacy, it has also, at the same time, given way to new experiences in the form of simulated reality.

One such early example of simulated reality was the invention of theatres by the Greeks, which had a massive following and a captivating impact on the audience. It creates an imaginary parallel world that contrasts with reality, leaving the audience spellbound under its influence. It had the power of stimulating and raising the passion of the masses. For this reason, the Greek philosopher Plato was against the immersive practice of theatre, which he thought was a bad influence on society. According to him, it motivated young minds of impressionable age to unreasonable action and, at times, to violence. A thin line exists between these two worlds of stimulated and existential reality. This was effectively demonstrated in the cinematographic output of *The Truman Show* and the *Matrix*.

However, some harmful influences were felt with the coming of the Internet. In more recent times, the deadly Blue Whale Game was responsible for online suicides among teenagers. However, this does not mean that the world of simulated reality is devoid of virtues. On the contrary, it has played a vital role in education, healthcare, awareness programmes, entertainment and immersive learning.

In addition to gaming, entertainment, and media production, simulated reality has other benefits, especially in learning and higher education. We all experienced how the world was thrown out of gear after the Coronavirus pandemic in 2020. According to one estimate, more than 87 per cent of the global student population was affected by the closure of schools and colleges. It was online learning and virtual reality that came to people's rescue. Online and virtual reality also provided working models to test products and models during global immobility in various industries. It also helped in improving productivity.

Other innovations further strengthened the virtual world's role as a solution provider to various industries. The people who were at the vanguard of this technological transformation were youth. They quickly learned, adopted, and implemented new technologies to meet exigencies. As youths are early adopters of technologies, the generational impact can be felt across various stages.

6.1 LEARNING OUTCOMES

After completing this Unit, you should be able to:

1. Understand the growth and expansion of the virtual world;
2. Discuss the technological impact on generational learning;
3. Explain the difference between the material and the virtual artefacts;
4. Discuss the various forms of simulated-based games and technologies;
5. Explain the participatory nature of the virtual world; and
6. Understand the emergence of a distinct class of digital natives.

6.2 THE GROWTH AND EXPENSE OF THE VIRTUAL WORLD

A virtual world is an open-ended simulated environment. It creates a new identity in the form of avatars to interact with the members of a tribe. It is a virtual platform created by technological storytelling where each member plays their part. The community members could belong to a social or professional group with certain skills, thus allowing them to interact at various levels of activities. During the last decade, the growth in virtual reality has been significant. According to one estimate, there are over a billion registered users with demographic dominance of the 10-15 age groups. Augmented Reality (A.R.) and Virtual Reality (V.R.) also rapidly expanded. It has a market size of \$28 billion and is expected to increase to \$252 billion by 2028. According to another estimate, some 23 per cent of

AR/VR device users belong to the 25-34 age group, which shows the dominance of youth in the sector. A device-based immersive experience of the virtual world has a significant share in the global trade. It has reached some 11 million devices, cutting across geographical areas. According to one estimate, the younger generation, in the age group 12-17 years, owns 75 per cent of cell phones. On average, they sent more than 3,000 messages in a month.

There has also been a drastic fall in the cell phone-owning age. In the U.K. alone, some 50 per cent of the age group of 10 have a Smartphone. Also, nearly a quarter of those under four years old have tablets. An increasing dependence on these devices has led to enhanced exposure to electronic screens. It has created a debate about its impact on children's eyesight and behavioural psychology. On the positive side, these technologies have also opened a new world of knowledge, information, and learning for the youth. It has exposed them to new cultures and value systems and connected people of diverse backgrounds globally.

The expansion of the virtual world also opened new opportunities for tech-savvy entrepreneurs who broke traditional business barriers. Many of the virtual businesses were initially start-ups of small businesses, but they later expanded at the global level. Multinational corporations acquired some in multimillion-dollar deals. The examples of Neopets and Club Penguin are among some of the most cited examples. Neopets is a virtual pet platform where users with currencies like Neopoints and Neocash can own and buy pets in the virtual world. While Neopoints are on-site-generated currency and can be won in the game, Neocash relates to real-world currency and can be transacted in the real world.

Neopets was later acquired by Viacom, which also owns Nickelodeon. Club Penguin, an online game established in 2005, was later acquired by the Walt Disney Company. In addition, new emerging media companies like Sulake4 and Mind Candy emerged and became powerful platforms in the virtual world.

Check Your Progress: 1

Notes: 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this Unit.

1. How would you describe the significance of virtual spaces in contemporary society?

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2. Discuss societal attitudes towards immersive experiences?

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3. What broader concepts do Neopoints exemplify, and how do they contribute to the dynamics of online interactions and economies?

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4. Explain the concept of 'bionic hearing' and its implications?

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6.3 THE TECHNOLOGY'S GENERATIONAL IMPACT

As new virtual world businesses were being established and expanding, their share in the global marketplace began having a significant impact. So much so that it began defining its users with separate and individualised identities. If we look at the history of global civilisation, technologies have defined each era, and based on it, societies have been variously defined. We are very much aware of the steam and electrical-powered machines that heralded the Industrial Revolution and the subsequent birth of industrial society. In the 21st century, expanding information and knowledge through networked computers and the Internet led to the birth of a knowledge society. However, these were the broad defining terms for which generational impact was not considered.

Only in the 1960s did familial and societal generations begin to be studied more closely. During this time, technologists and sociologists observed that the invention of new technology had a much deeper and more rapid impact. Instead of bringing a major generational shift (popularly called the generation gap) every 50 or 20 years, the behavioural change in a new generation was felt every ten years or even less. Some technologies were used to define the period's youth, defining their technological identity.

Although no scientific method defines the generational shift, most theories are based on broad parameters and generalisation. In some cases, the defining

features were sociological and demographic changes, such as at the end of World War II when American society observed an increased birth rate between 1946 and the mid-1960s, leading to the labelling of the generation as baby boomers. The baby boomers were soon followed by the next generation born between the mid-1960s and the early 1980s and popularly called Generation X, based on Douglas Coupl's novel "*Generation X: Tales for an Accelerated Culture*". The generation showed a marked deviation in their behaviour because of scepticism towards traditional society, leading to their disillusionment, anger and frustration with the existing realities. Generation X was taken over by Generation Y, who are popularly called millennials. They were born between the early 1980s and the latter half of the 1990s and were at the threshold of major technological change as computers and the Internet made their way. Like the previous generation, the name of the generation was derived from a book titled "*Generations: The History of America's Future, 1584 to 2069*", which considered the cyclic nature of human behaviour.

Generation Z soon followed Generation Y, markedly different from their previous generation. Born as they were at the turn of the millennium, they were already exposed to smartphones. They spent their adolescence with the new-age technology as the iPhone arrived. Not surprisingly, three-fourths of that generation already had an iPhone. This generation has also been called iGen because of the communication device they came to be identified with. One of the features of their behavioural pattern has been an increase in screen time. They spend more time on devices, leading to social deprivation. For this generation of youth, the device helped them socialise and form group identities in the virtual world. The generation also suffered from mental health crises as they had less social support in the real world. They were found to be less self-confident, less optimistic and often unhappy with their real life. Some of them also suffered from depression and anxiety because of their inability to adapt to social realities outside.

The youth born in the virtual world age were a by-product of a changing world, shaped by new technology, new socio-economic order and geopolitical forces. The fast pace of life, innovation, and an interconnected world stressed the need for self-sustainable individuals. Their individual needs were fulfilled by the emerging technology that provided immersive experience, whether in learning, entertainment or skilful gaming. The new technology proved complimentary to the changing psychology of individuals. Now, the Artificial Intelligence-driven virtual world has become efficient in providing companionship and acting as a friend, philosopher and guide, thereby reducing the need for human socialisation. This sounds futuristic and unreal to an earlier generation; the new generation seems steeped in a new digital experience.

6.4 THE GENERATION ALPHA

The rapid generational change has been most obvious during the last ten years because of accelerated technological development. This has led to the development of a new construct in the form of Generation Alpha, which is

considered a generation in the making. They are a new generational cohort, born after 2010 and are more technologically savvy. They were born in the digital age when the virtual world had already established itself. In a way, they did not inherit the virtual world but were instead born *into* it. They also faced the 2020 Coronavirus pandemic-led lockdown and conducted their education online, thus showing remarkable adaptability. Many of them spent their first year of educational life online. Having distinct behaviour and personality traits, their number is expected to cross two billion by 2025, thus making it the biggest generational cohort.

They are the generation more driven by voice than a keyboard through virtual voice assistants like Apple's *Siri* and Amazon's *Alexa*. This Generation is hyper-connected through information highways and spends considerable time online on various virtual and social media platforms. They have also been shaped and influenced by the web and online ecosystem. Many of them have become social influences in their capacity. They were born in the age of iPads, iPhones, and apps, greatly impacting their behaviour, lifestyle and attitude.

Generation Alpha are equally active on social media platforms and Instagram, with the latter sharing its origin in 2010. They were born and brought up with screens before their eyes, with a new world of online and virtual worlds. Virtually connected with the rest of the world, the generation was technologically empowered to enter a new era, shaping their engagement. Unlike the previous generation, the Alpha generation is more tolerant, open, and welcoming of new changes and believes in gender parity and inclusivity. Many Alpha generations are connected with their close environment, thus having opinions on political issues, sustainability, development and climate change.

Check Your Progress: 2

Notes: 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this Unit.

1. Analyse the generational categorization of 'Generation X'?

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2. Discuss the emergence of the Alpha Generation and its significance within the context of evolving demographics?

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3. Explore the notion of 'digital natives' and its relevance in understanding contemporary societal dynamics?

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6.5 DIGITAL NATIVES

The virtual world has given rise to several nomenclature for its inhabitants. Digital native is one of the most popular acronyms and has recently gained coinage. It also includes a wide range of digital and virtual user experiences. Alpha generation is one of the recent subsets added to it. There are also other names, like the 'net savvy' Generation, Google Generation, and M Generation, for using Media and MySpace, which are associated with the youth. Because of deep immersion in devices and their online screen presence, the digital natives have also been called Screenagers and millennials on steroids because of their hyperactive presence in the digital space. The digital natives are youth born after 1989, showing a marked difference from the earlier generation.

Digital natives are also known for their ability to get into "the zone" of the metaverse, a new form of virtual experience. One popular virtual metaverse that has gained popularity among the youth is Metaspaces, which provides a 3D virtual experience to its users. Metaspaces is a virtual space where youth create their avatars and get to study, work, play, dance, learn and interact with like-minded users. This also offers a play-to-earn game that enables users to earn while enjoying the virtual experience. Built on a Unity game engine, Metaspaces is quite popular among youth because it is profitable and adventurous. In addition to being a game, it is an entire universe which entertains and up-skills the users.

While the game-oriented virtual worlds provide users with an online adventurous experience, Social Virtual Reality (SVR), on the other hand, focuses on social interaction between digital natives. It is not guided by narrative as in the gaming virtual world and lacks level-ups, portrayal and character advancement. In short, the social virtual world becomes the site of building social character and helps its users with the simulation of behavioural science. For the youth, SVR holds special interest as it allows them to interact and socialise online. It offers immersive activities and social engagements to diverse groups of people belonging to disparate cultures, nationalities, genders and age groups. However, there is little research on the likes and dislikes of the youth on these platforms that could help its makers scale up or tone down some of its features and calibrate the outcome of the SVR space.

6.6 THE TWO WORLDS: THE REAL AND THE VIRTUAL

For the youth, both the real and the virtual worlds are spaces for negotiating

their identities and making space for themselves. It is also a site for self-gratification and demand-fulfilling. In addition to socialisation, it offers opportunities for expressing individual personalities through varied avatars, which becomes their new identity in the virtual world. As mentioned earlier, a virtual world is a computer-simulated space where numerous individuals and avatars interact, converse, communicate and participate in common activities. It is a community of like-minded people empowered by virtual space. These community members are quite similar in their virtual space but different in personalities, skills and individual dispositions.

Sometimes, the material artefacts of the real world may or may not correspond to the virtual world as the latter is based on different norms and rules of the digital space. These differences notwithstanding, there has been exponential growth in virtual spaces as they offer an opportunity for youth to connect with people, forming tribes of like-minded people. It also has the benefit of bypassing some of the limitations like physical space and unpleasant experiences on the part of the users. In addition to this, there are fewer biases and shaming based on physical deformity in the virtual world. People with disabilities can lead a normal and respectful life like any normal avatar. The virtual world has the unique feature of filtering the unwanted, thus debarring unpleasant personalities who have the potential of becoming a liability to the tribe.

Recently, it has often been argued that youth spend more time online than offline, sometimes at the cost of their social life and activities. While this is true, technology has driven them in that direction. Today, youth live in a hybrid world marked by simultaneous presence, both in the real and virtual world. Their online presence has now been replaced by "inline" simultaneous real and virtual existence. They are hyper-connected with their group members through the Internet. An avatar in the virtual world enjoys multiple identities and may espouse multiple causes, including social, political, professional, and religious ideologies.

While part of the virtual world, the youth is equally connected with real-world issues like sustainability, equitable development, climate change and gender issues. This is evident based on their participation in these social and political movements. Moreover, there are also connecting links between the real and the virtual world in the form of Milgram and Kishino, which provides a continuum between the two parallel worlds. Augmented reality, on the other hand, has attempted to provide a link between the real and the virtual worlds. The virtual identity of the 'born on the Internet' generation has become so overwhelming that it has become the primary source of their secondary identity in the real world. They identify themselves with their new avatar more than their real selves.

Sometimes, dual identity creates disharmony for the users. The dominant identity in fulfilling their needs becomes their primary source of inspiration. Individuals sometimes create impressive avatars for public display that make them look happy, confident, and healthy. This is contrary to their real and fundamental nature in the real world. Psychologists have called this behaviour in the virtual world as wish-fulfilment. Dominant virtual avatars

are sometimes deliberately created, using technological features to dominate the virtual space. These avatars can 'attend' all events and be everywhere using Internet connectivity. Sometimes, they can increase 'bionic hearing' that controls, monitors and alters the listening experiences of the users through in-ear headphones. Thus, the virtual world has its power structure, which is technologically driven and sometimes challenged by its users. Although virtual reality offers hordes of new features and experiences to its users, it could not somehow find a mass appeal like Facebook, Twitter, Instagram and YouTube.

Avatar-based navigation and a longer learning curve will likely deter new users. Another reason is the necessity of having an effective audiovisual ecosystem. But despite all these constraints, there has been tremendous growth in the virtual reality business, with new investments, applications, and ideas finding rapid incorporation. It could be hoped that some of these applications will find wider acceptance and be included on existing platforms like Facebook, Instagram, and YouTube.

6.7 THE SIMULATION-BASED GAMES

Computer-mediated simulation games are among the most popular virtual reality products and have been widely accepted among youth. Often considered addictive and having a bad influence on young, impressionable minds, these games have become an easy escape from the harsh reality of day-to-day living. The youth is said to get immersed in the virtual "zone," so much so that they are disconnected from the real world. Some sociologists view it as a result of social and political stratification and alienation due to unemployment, poverty and political and religious divides.

The virtual world, which is participatory, offers its users a level-playing field where all members are equal. It is a platform where all differences are dissolved. Some parents prefer these virtual spaces as they offer good learning and socialisation experiences. The parents feel that it saves the child from real violence and bullying. But some experts say there is no escape from the real world. The youth must be exposed to harsh realities during the learning process.

In addition to these socialisation pressures, there is, however, hard economics involved in the gaming industry. More and more investors, business houses and multinational corporations are looking at the gaming industry as a business with a good return. In the process, they target youth as one of its biggest consumers. According to one estimate, the global revenue in gaming was US\$159.3 billion in 2020, showing a growth of 9.3% over the previous year. Europe contributed US\$29.6 billion, North America US\$40 billion and China US\$43 billion. In recent years, investments have increased, targeting countries with a youth population.

Since the time gaming became popular, there have been two profit models that its users have practised. One is "pay to win", and the other is "paying for passion". In the former model, which was popular till 2015, players paid to upgrade their capabilities. They paid to add faster and stronger features, which helped them stand out from their competitors. But with the launch of

Honor of Kings in 2015, the model transformed overnight where skills, abilities and spending more time chiselling the skills became the source of profitable earning. In this model, the users did not have to invest money but their time to make a profit in the virtual space. So, these platforms became new sites for fair and equitable play where a virtual avatar becomes the source of passion.

Some of the other popular games, depending on the age and inclinations of the users, are *Second Life* for adults, *Habbo* for youth and *Whyville* for children. *Habbo* was one of the most popular virtual worlds in the early 2000s, with more than 10 million monthly users. However, with the introduction of gaming apps by Facebook and other social networking sites in the 2010s, the popularity of *Habbo* declined considerably. For the youth, Club Penguin is another popular game that has gained a good following. Pet Society and Secret Builder are other virtual world games for young children. Big business corporations like Webkinz, Bratz, and Barbie dolls have attempted novel ways to converge these virtual games with real-world objects like toys, dolls and other artefacts. This has helped consolidate revenues for the corporations and brought a sense of familiarity with the virtual world for the children.

According to a study, parents view these virtual platforms as safe places for socialising and skill learning for their children. In addition to these games, there are other computer-mediated simulation games like Xbox 360 and Nintendo Wii, which are quite popular among the youth. Other games like Free Fire or Asphalt 9 have recently found considerable users. These games have helped the youth in nurturing talent. Children can be seen playing games on Roblox while communicating with friends on Discord. These virtual games have helped people come together on a common platform. In some games, there are options for a co-op split screen, as in Super Mario Galaxy, which helps the user invite a friend and participate indirectly.

These virtual worlds belong to Virtual Environments (V.E.s), initially developed for the entertainment and gaming industry. The World of Warcraft and Habbo Hotel have carved a niche for themselves in this direction. At one point in time, it is interesting to note Habbo Hotel had more than 200 million registered characters and was touted as the "world's largest online community". Youth has also been using other tools like Roundme and Aurasma for self-directed learning and for developing critical thinking. To solve difficult problems, they have been using Xmind in addition to Google, One Drive, Facebook and Edmodo for communication and collaboration.

6.8 THE PARTICIPATORY CULTURE OF THE VIRTUAL WORLD

As a result of technological innovation, the virtual world of the 21st century has become more accommodative, participatory and democratic. While the communication flow in the earlier generation was one-way, in the virtual world, it has become a seamless flow in both directions. The distance between the source and the receiver has almost diminished, allowing instant exchange of ideas, information and skills. Now, the consumer in the virtual

world has also become a creator and an active partner. As a result, the virtual world has become a site of engagement for both partners with some minor modifications. For the source, the virtual world has provided them with a unique capability to participate, learn and improve the process on which the virtual world is based.

The 'Web 2.0' heralded an era of 'online participatory culture' that has continued apace in a new format in the virtual world. The participants, whether in the form of new avatars or on gaming platforms, take part in real-time while being dispersed in various geographical locations. The time-space continuum seems to have shrunk in the virtual world, providing participants with a level playing field. The 'user-centric approach' has become so overwhelming that it has forced big corporations to consider the users' 'changing tastes, preferences and subcultures'. Some virtual reality platforms' designs are based on user experience to gain acceptability and authenticity.

Check Your Progress: 3

Notes: 1) Use the space below for your answer.

2) Compare your answers with those given at the end of this Unit.

1. Evaluate the phenomenon of avatar creation in virtual spaces?
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2. Assess the global gaming industry's economic landscape?
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3. Enumerate the evolution of virtual spaces and their impact on youth culture?
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6.9 LET US SUM UP

As we learnt, the virtual world has opened a new world of immersive experience to the youth, providing them a unique opportunity to participate in the hyper-connected world. It has given rise to generational change, leading to a new tribe of digital natives who are more dependent on new technology than any other generation before. Although the real and virtual worlds work on different levels, their conflict becomes inevitable, given their differences. There is a wide disparity between the two, and neither mirrors the live-in reality of the other. However, the participatory nature of the virtual world makes it an apt place to chisel digital skills and socialise in the ethereal world. This virtual world is not real but contains some features that are close

to the existing world.

The simulation-based games have added a new dimension to the active participatory nature of the new reality world. The concept of avatars is considered an individual's alter ego, finds a vicarious fulfilment of desires, and lives a parallel life quite akin to the one they desire. While it has immense utility at the individual level, it has also led to personality disorders where the user is not able to differentiate between the two worlds clinically, leading to adaptability issues. However, These aberrations are insignificant compared to its advantage, which has found application in learning, entertainment, designing, improving productivity and engaging with diverse audience groups. This is particularly useful for youth born in the digital age and those who have mastered the art and science of the virtual world.

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6.11 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

Check Your Progress: 1

1. Virtual spaces, such as the internet, serve as crucial platforms for communication, collaboration, and entertainment in modern society. They transcend physical boundaries, enabling individuals to connect globally and engage in diverse activities, from social networking to immersive gaming experiences. These spaces facilitate the exchange of ideas, cultures, and information, shaping contemporary interactions and behaviours. Through virtual environments, people can explore new identities, express creativity, and form communities based on shared interests. Moreover, virtual spaces play a significant role in education, commerce, and cultural exchange, contributing to the increasingly interconnected nature of our world.
2. Throughout history, various civilizations have grappled with the influence of immersive experiences like theatre on youth. For instance, ancient Greeks viewed theatres with scepticism, fearing their potential to corrupt the morals of young individuals through vivid portrayals of human emotions and vices. Similarly, in Roman society, theatres were often associated with decadence and moral decay, prompting concerns about their impact on impressionable minds. In Indian and Chinese cultures, similar debates arose regarding the educational and moral value of theatrical performances. These historical perspectives shed light on broader societal attitudes towards entertainment and its perceived effects on youth development.
3. Neopoints, within virtual environments, represent a form of currency or reward system utilised for various purposes, including purchasing virtual goods, upgrading avatars, and participating in in-game activities. These points hold value within the virtual ecosystem, serving as a means of measuring achievement, progress, and status. Users can earn Neopoints through gameplay, completing tasks, or engaging in virtual economies. Additionally, Neopoints often contribute to the gamification of online experiences, incentivizing user participation and fostering engagement. Their significance extends beyond mere virtual transactions, reflecting the integration of economic principles into digital environments and the evolution of online communities.

4. 'Bionic hearing' refers to the enhancement of auditory perception through technological interventions, typically involving the use of advanced hearing devices or implants. Unlike traditional hearing aids, which amplify sound, bionic hearing technologies utilise sophisticated algorithms and sensors to mimic the functionality of the natural auditory system. By capturing, processing, and transmitting sound signals directly to the auditory nerve, these devices can restore or augment hearing capabilities in individuals with hearing impairments. Bionic hearing represents a groundbreaking advancement in the field of assistive technology, offering improved sound quality, speech intelligibility, and spatial awareness for users. Its development underscores the potential of technology to address sensory disabilities and enhance human experiences.

Check Your Progress: 2

1. Generation X encompasses individuals born roughly between the mid-1960s and early 1980s, characterised by distinct socio-cultural influences and generational traits. Growing up in the aftermath of significant social upheavals, such as the civil rights movement and the Vietnam War, Generation X is often associated with a sense of disillusionment and pragmatism. They witnessed rapid technological advancements, economic shifts, and changes in family structures, shaping their worldview and values. Generation X is known for its entrepreneurial spirit, independent mindset, and scepticism towards authority. Their experiences bridge the gap between preceding generations and subsequent digital natives, contributing to diverse perspectives within contemporary society.
2. The Alpha Generation comprises children born after the 2010s, representing the first cohort to grow up entirely in the digital age. Raised amidst ubiquitous technology, they are characterised by their innate familiarity with digital devices, internet connectivity, and digital media. The Alpha Generation's upbringing is marked by constant exposure to screens, interactive gadgets, and online platforms, shaping their cognitive development and social interactions from an early age. Unlike previous generations, who witnessed the emergence of digital technologies, Alphas are born into a world where digital interfaces are ubiquitous, influencing every aspect of their lives. Their unique upbringing poses challenges and opportunities for education, parenting, and societal adaptation in the digital era.
3. Digital natives are individuals who have grown up immersed in digital technologies, shaping their identities, behaviours, and relationships in profound ways. This demographic group is characterised by their fluency in navigating digital interfaces, leveraging technology for communication, learning, and entertainment. Digital natives exhibit a natural affinity towards internet-connected devices, social media platforms, and digital content creation tools. They are adept at multitasking, information processing, and online collaboration, reflecting the transformative impact of digitalization on modern lifestyles. Digital natives' experiences underscore the evolving nature of human-machine

interactions, blurring the boundaries between physical and virtual realities. Their emergence poses implications for education, media consumption, and societal norms in an increasingly digitised world.

Check Your Progress: 3

1. Avatar creation in virtual spaces allows users to craft digital representations of themselves, known as avatars, to navigate and interact within digital environments. These customizable personas serve as extensions of users' identities, enabling them to express individuality, creativity, and social presence in online interactions. Through avatar creation, users can customise various aspects of appearance, personality, and behaviour, reflecting personal preferences and aspirations. Avatars facilitate social engagement, enabling users to connect with others, form communities, and participate in virtual activities. Additionally, avatar creation fosters a sense of ownership and agency within virtual environments, empowering users to shape their digital experiences and narratives.
2. The global gaming industry experienced significant growth in revenue, reaching an estimated US\$159 billion in 2020. This substantial economic impact reflects the industry's resilience and adaptability in response to changing consumer preferences, technological advancements, and market dynamics. Factors contributing to this growth include the widespread adoption of digital distribution platforms, the proliferation of mobile gaming, and the rise of esports as a mainstream entertainment phenomenon. The gaming industry's revenue encompasses various sources, including game sales, in-game purchases, subscription services, and advertising revenue. Moreover, the COVID-19 pandemic accelerated digital transformation trends, leading to increased demand for gaming content and online social experiences. As such, the gaming industry continues to be a lucrative sector driving innovation and cultural engagement on a global scale.
3. During the early 2000s, Habbo emerged as a popular virtual space for youth, attracting millions of monthly users and fostering social interactions within its digital ecosystem. As a virtual community platform, Habbo provided users with customizable avatars, virtual rooms, and social features for communication and collaboration. Its appeal stemmed from its vibrant virtual environment, which facilitated socialisation, creativity, and self-expression among users. Through avatar customization, users could personalise their virtual identities and engage in a wide range of activities, including virtual parties, games, and role-playing experiences. Habbo's success highlights the growing significance of virtual communities in youth culture, shaping digital interactions and social dynamics during the early internet era.

UNIT 7 CHALLENGES AND RISKS IN THE VIRTUAL WORLD

Structure

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- 7.1 Learning Outcomes
- 7.2 Concept of Cyberspace
 - 7.2.1 Characteristics of Cyberspace
 - 7.2.2 Issues Emerging from Cyberspace and Need for Regulation
- 7.3 International and National Cyber Laws
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 - 7.4.2 Regulation of Certifying Authorities
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 - 7.4.4 Intermediaries
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 - 7.5.2 Cybercrimes: Some Cases
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- 7.7 Further Readings
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7.0 INTRODUCTION

In the era of rapid use of information communication technologies networks, devices and services worldwide, cyberspace has emerged as a new medium of communication. According to the International Telecommunication Union (ITU), International Internet bandwidth is growing rapidly worldwide, and India is among the front runner nations of the world. In India, the Internet is growing at a fast pace in cities as well as villages. More and more people are using mobile telephones, and this has further accelerated its growth in the country. The new virtual space has thus given rise to many social and national issues and has posed new challenges to deal with technology driven cybercrimes and to protect a person's privacy and intellectual rights.

This Unit provides you an overview of the concept of cyberspace, cybercrimes and other issues emerging from it.

7.1 LEARNING OUTCOMES

After completing this Unit, you should be able to:

- Discuss the concept of cyberspace;
- Explain the need for regulation of cyberspace;

- Outline various issues emerged due to cyberspace;
- Describe cybercrimes and offences under Information Technology (IT) Act; and
- Acquaint yourself with the law regulating cyberspace in India.

7.2 CONCEPT OF CYBERSPACE

Cyberspace represents a space created by science where various events, sharing of ideas take place with the help of the Internet connecting various computer systems and mobile phones.

With the advent and growth of electronic communication, the word “cyberspace” has entered our everyday parlance. But what does this word signify? To a common person, cyberspace refers to a virtual area without limits where one can meet people and discover information on any subject through the Internet. In cyberspace you can find right, wrong or confusing answers to almost any question. This description of cyberspace is not 100% accurate, but it points out some of its important characteristics: its non-physicality, its social dimension and its functionality.

According to Rebecca Bryant, Cyberspace represents “the new medium of communication, electronic communication, which is fast outmoding, or even replacing, more traditional methods of communication. It appears, then, that space and cyberspace can count as roughly equivalent conceptual entities, at least in the sense of sharing the four common sub-concepts of place: distance, size, time and route.

Despite the differences, cyberspace is, in one way, intimately connected with the physical world. Cyberspace depends, for its very existence, on hardware and software, cables and routers — it depends on physical objects existing in physical space. And, of course, this intimate connection between the two also represents a fundamental difference - physical space, if it exists, depends on nothing at all”.

7.2.1 Characteristics of Cyberspace

David B. Whittle in his book, “Cyberspace: The Human Dimension”, has identified three characteristics of cyberspace: (1) It is not a physical location but a virtual space. (2) One needs an access device to enter cyberspace. That means one needs some sort of physical access device (may be a computer screen, a telephone, a terminal, etc.) with an artificial processing mechanism, such as digital computing power and/or software. And that should be joined with other access devices on a network of physical connections. (3) It enables interaction and communication between individuals and groups of individuals and their creative output, largely independent of time and space.

7.2.2 Issues Emerging from Cyberspace and Need for Regulation

Today new communication technologies, usage of mobile phones and other communication devices are globally challenging the traditional notion of

jurisdiction. It has led to the possibility of invasion of the privacy of an individual. There is a need to have effective law to deal with the problems of cyber social media crimes, rumour-mongering, email spoofing, spams, cyber stalking, defamation and various other cybercrimes as the impact of these crimes can be more than the conventional crimes. These cybercrimes are usually committed by the person using fake identity, not readily and easily identifiable.

Further, due to anonymity and the ease of circulation it has given rise to many social debates that demand the reconciliation of the two views viz., freedom of speech and expression and the concern for maintaining basic civic peace and standards. Besides this, the major areas of concern which calls for strict regulation are: Management of Intellectual Property and to prevent Infringements in digital media; spread of terrorism, cross border taxation; cyber security which is an expensive affair as the business organisations are vulnerable to data breaches leading to loss of business opportunities and therefore needed to be secured from unauthorised access, modification or removal of data/information, data theft; authentication, data protection and data privacy of the industries, individuals and government agencies; Encryption; Protection of e-consumers from the misleading advertisements of goods and services enabling them to make informed and meaningful choices. The business organisations must manage the consumer information responsibly respecting the privacy of the individuals, but this requires strict regulators restricting the exchange and use of data.

Check Your Progress: 1

Note: 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this unit.

1) What are the characteristics of cyberspace?

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2) Why do we need cyberspace regulation?

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7.3 INTERNATIONAL AND NATIONAL CYBER LAWS

In this section we shall briefly discuss the international and national laws which govern cyberspace.

7.3.1 International Law

UNCITRAL Model law 1996, Model law on E-Signature, 2001 and United Nations Convention on the Use of Electronic Communications in International Contracts, 2005 constitute some international initiatives relating to cyberspace.

UNCITRAL Model law 1996 -The first Model Law on E-commerce was adopted in 1996 by the United Nations Commission on International Trade and Law (UNCITRAL). The General Assembly of the United Nations adopted it by passing a resolution on 30th January 1997. The prime objective of the law was to have uniformity in law relating to e-commerce at international level and to provide equal treatment to paper-based and electronic information. India is also signatory to this Model law and hence, enacted the Information Technology Act, 2000.

Model law on E-Signature, 2001(MLES) - In 2001, the Model law on E-Signature was adopted by United Nations Commission on International Trade and Law (UNCITRAL) with the aim to enable and facilitate the use of electronic signatures by establishing criteria of technical reliability for the equivalence between electronic and hand-written signatures. The law may assist countries in establishing a modern, harmonised and fair legislative framework to effectively address the legal treatment of electronic signatures and give certainty to their status. Accordingly, India passed the Information Technology (Amendment) Act, 2008, which made necessary amendments in 2000.

United Nations Convention on the Use of Electronic Communications in International Contracts, 2005 - It was adopted on 23 November 2005 and came into force on 1 March 2013. It recognises the fact that electronic communications play a fundamental role in promoting trade and economic development both domestically and internationally and improves the efficiency of commercial activities. It aims to provide a common solution to remove legal obstacles to the use of electronic communications in a manner acceptable to States with different legal, social and economic systems. The Electronic Communications Convention aims at facilitating the use of electronic communications in international trade by assuring that contract concluded, and other communications exchanged electronically are as valid and enforceable as their traditional paper-based equivalents.

7.3.2 National Law

The Government of India being signatory to UNCITRAL LAW on E-commerce enacted the 2000 which was amended in the year 2008 to implement the UNCITRAL Model Law on Electronic Signatures, 2001. Many traditional crimes which are capable of being committed with the use or aid of or through computers and technology have been brought within the definition of conventional crimes and therefore fall under the ambit of the Indian Penal Code, 1860 as amended. The Evidence Act, 1872 has been amended, section 65A and section 65B of the Indian Evidence Act, 1872 provides for Admissibility of electronic records as evidence. The Banker's

Book Evidence Act, 1891 and the Reserve Bank of India Act, 1934, have also been amended to facilitate collection of evidence to deal with cybercrimes or any matter connected with such crimes. The main purpose of these amendments is to address the related issues of electronic commerce, electronic crimes and evidence and to enable further regulation regarding Electronic Fund Transfer.

For further detailed information, you may visit the website of the United Nations Commission on International Trade Law: www.uncitral.org.

7.4 INFORMATION TECHNOLOGY ACT, 2000

The Information Technology Act, 2000 aims to provide legal recognition for the transactions carried out by the means of electronic data interchange and other means of communications commonly referred to as “Electronic Commerce”, which involve the use of alternatives to paper-based methods of the communication and storage of information, to facilitate electronic filing of document with the government agencies.

7.4.1 Electronic signature and Electronic records

Section 3A of the Information Technology Act provides that a subscriber may authenticate any electronic record by such electronic signature or electronic authentication technique which (a) is considered reliable; and (b) may be specified in the Second Schedule.

Chapter III of the Act pertains to legal recognition of the electronic records (Section 4), electronic signature (Section 5) and their usage in Government and its agencies (Section 6). Chapter IV lays down rules for attribution of the e-record, the mode and manner of its acknowledgement and determination of time and place of dispatch and receipt of electronic records. Section 10A provides for validity of contracts formed through electronic means. Chapter V lays down conditions for secure electronic records and secure electronic signature.

7.4.2 Regulation of Certifying Authorities

The provisions relating to Regulation of Certification Authorities are given in Chapter VI of the Information Technology Act. Chapter VI deals with appointment of a controller and other officers, functions of controller, recognition of foreign certifying authorities, licence to issue electronic signature certificates – application, renewal, suspension of licence and procedure for grant or rejection of licence.

Functions of Controller

Controller of Certification authority is a focal point in the Information Technology Act, who shall discharge the functions under this Act subject to the general control and directions of the Central Government. According to Section 18 of the Information Technology Act, the Controller may perform all or any of the following functions:

- a) Exercising supervision over the activities of the Certifying Authorities.
- b) Certifying public keys of the Certifying Authorities.
- c) Laying down the standards to be maintained by the Certifying Authorities.
- d) Specifying the qualifications and experience which employees of the Certifying Authorities should possess.
- e) Specifying the conditions subject to which the Certifying Authorities shall conduct their business.
- f) Specifying the contents of written, printed or visual materials and advertisements that may be distributed or used in respect of a Digital Signature Certificate and the public key.
- g) Specifying the form and content of a Digital Signature Certificate and the key.
- h) Specifying the form and way accounts shall be maintained by the Certifying Authorities.
- i) Specifying the terms and conditions subject to which auditors may be appointed and the remuneration to be paid to them.
- j) Facilitating the establishment of any electronic system by a Certifying Authority either solely or jointly with other Certifying Authorities and regulation of such systems.
- k) Specifying the way the Certifying Authorities shall conduct their dealings with the subscribers.
- l) Resolving any conflict of interests between the Certifying Authorities and the subscribers.
- m) Laying down the duties of the Certifying Authorities.
- n) Maintaining a database containing the disclosure record of every Certifying Authority containing such particulars as may be specified by regulations, which shall be accessible to the public.

Powers of Controller

In Section 24 of the procedure for grant or rejection of licence is stated. According to this Section, the Controller may, on receipt of an application under Section 21(1), and after considering the documents accompanying the application and such other factors, as he deems fit, grant the licence or reject the application. However, no application shall be rejected under this section unless the applicant has been given a reasonable opportunity of presenting his case.

Section 25 of the procedure for suspension of licence is laid down. According to this Section:

- 1) the Controller may, if he is satisfied after making such inquiry, as he may think fit, that a Certifying Authority has-
 - a) made a statement that the application for the issue or renewal of the licence is incorrect or false in material particulars;

- b) failed to comply with the terms and conditions subject to which the licence was granted;
 - c) failed to maintain the procedures and standards specified in Section 30;
 - d) contravened any provisions of this Act, its rules, regulations or orders; revoke the licence: Provided that no licence shall be revoked unless the Certifying Authority has been given a reasonable opportunity of showing cause against the proposed revocation.
- 2) The Controller may, if he has reasonable cause to believe that there is any ground for revoking a licence under the above sub-section (1), by order, suspend such licence pending the completion of any enquiry ordered by him. However, no licence shall be suspended for a period exceeding ten days unless the Certifying Authority has been given a reasonable opportunity of showing cause against the proposed suspension.
 - 3) No Certifying Authority whose licence has been suspended shall issue any Digital
 - 4) Signature Certificate during such suspension.

Sections 28 and 29 of the Act provide power to the Controller or any officer authorised by him to investigate contraventions and to access to computers and data if he has reasonable cause to suspect any contravention of the provisions of this Act, its rules or regulations.

7.4.3 Cyber Appellate Tribunal

Section 57 of Information Technology Act lays down provisions relating to Appeal to Cyber Appellate Tribunal.

- Any person aggrieved by an order made by controller or an adjudicating officer under this Act may file an appeal to a Cyber Appellate Tribunal having jurisdiction in the matter, within forty-five days of receipt of the copy of the said order. However, no appeal shall lie to the Cyber Appellate Tribunal from an order made by an adjudicating officer with the consent of the parties. The Cyber Appellate Tribunal can also entertain an appeal after the expiry of the said period of forty-five days, if it is satisfied that there was sufficient cause for not filing it within that period.
- The Cyber Appellate Tribunal shall give both the parties to the appeal, an opportunity of being heard before passing such orders.
- The appeal filed before the Cyber Appellate Tribunal shall be disposed off as expeditiously as possible with an endeavour for final disposal within six months from the date of receipt of the appeal.

Procedure and powers of the Cyber Appellate Tribunal– Section 58 of Information Technology Act provides that the Cyber Appellate Tribunal has, for the purposes of discharging its functions, the same powers as are vested in a civil court under the Code of Civil Procedure, 1908 while trying the suit.

However, the Tribunal shall not be bound by the procedure laid down by Section 5 of Code of Civil Procedure, 1908, but shall be guided by the principles of natural justice and, subject to the other provisions of this Information Technology Act and its rules. The Tribunal shall have powers to regulate its own procedure including the place at which it shall have its sittings.

7.4.4 Intermediaries

Section 2(1) (w) of Information Technology Act defines: Intermediary means any person who on behalf of another person receives, stores or transmits that record or provides any service with respect to that record. Intermediary includes telecom service providers; network service providers; internet service providers; web-hosting service providers; search engines; online payment sites; online- auction sites; online-marketplaces and cyber cafes.

As the Internet has grown to permeate all aspects of the countries and economy; the role of Internet intermediaries in bringing together or facilitating interactions, transactions or activities between third parties on the Internet is crucial as they influence and determine access to and choice between online information, services and goods.

Duties of Intermediaries:

- According to Section 67 C of Information Technology Act, Intermediary shall preserve and retain such information as may be specified for such duration and in such manner and format as the Central Government may prescribe. In case of intentionally contravening this duty, the Act provides that intermediary shall be punished with an imprisonment for a term, which may extend to three years and be liable to fine.
- Section 69(3) provides that the subscriber or intermediary or any person in- charge of the computer resource shall, when called upon by Central Government or a State Government or any of its officers specially authorised by the Central Government or the State Government, must extend all facilities and technical assistance to them. Intermediary will provide them access to (a) the computer resource generating, transmitting, receiving or storing such information; or (b) intercept, monitor, or decrypt the information; or (c) information stored in computer resources.
- The Information Technology Act also deals with blocking public access of any information through any computer resource. The intermediary has to comply with the direction issued by the Government in this regard. In case, the intermediary fails to comply with the direction issued shall be punished with an imprisonment for a term which may extend to seven years and be liable to fine.

Role of intermediaries and the law

Intermediaries play an important role and act as the tools that enable users to access information and provide new opportunities for social activities and citizen participation. Their technical capacity to prevent harm by

strengthening cyber security, e-consumer security and to protect privacy and intellectual property rights are very important. It has always been the concern across the world that besides certain duties and responsibilities the intermediaries must also be given protection or exemption from legal liability that could arise due to posting of illegal content by the users. In many countries like the USA and members of the European Union, there are attempts to provide legal protection to intermediaries from such user generated content. Such protection is often termed as a ‘safe harbour’ protection. Our Information Technology Act also provides for exemption from liability of intermediary in certain cases as discussed below:

Exemption from liability

Under Information Technology Act intermediaries are not liable for any third-party information, data, or communication link made available to others in following cases:

1. Where the intermediary does not–
 - a. initiate the transmission,
 - b. select the receiver of the transmission, and
 - c. select or modify the information contained in the transmission;
2. Where the intermediary observes due diligence while discharging his duties under this Act and observes such other guidelines as the Central Government may prescribe from time to time.

Liability of intermediaries

Intermediary will be liable in the following circumstances:

- a) Where the intermediary has conspired or abetted whether by threats or promise or otherwise in the commission of the unlawful act;
- b) On being notified by the appropriate Government or its agency that any information, data or communication link residing in or connected to a computer resource controlled by the intermediary is being used to commit the unlawful act, if the intermediary fails to expeditiously remove or disable access to that material on that resource without vitiating the evidence in any manner.

Check Your Progress: 2

Note: 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this unit.

- 1) Define the term ‘intermediaries’.

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2) Who can file an appeal to the Cyber Appellate Tribunal?

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7.5 CYBERCRIMES

The term cybercrime refers to the wide range of crimes that involves computers and networks, where a computer is used as a tool to commit crime or computer itself is the target of a crime or incidental to a crime. The term cybercrimes, if used in generic sense, its scope can be extended to covers many kinds of civil and criminal wrongs. The cyber-crimes are committed against individuals or property, they are also committed against an organisation - Government, non-government; company; firm or group of individuals, or against the society at large.

7.5.1 Types of Computer Crimes

Computer crimes can be categorised as given below:

Conventional crimes committed through computer: There are several traditional or conventional crimes that are committed against individuals and their properties. Many of these crimes are now being committed by the aid of computers. Cyber defamation, cyber pornography, cyber stalking/harassment, cheating, digital forgery, theft, Internet fraud/ financial crimes including cheating, credit card frauds, money laundering, online gambling and sale of illegal articles, cyber terrorism etc are the crimes punishable under both Indian Penal Code and Information Technology Act.

Cyber defamation (publication of a defamatory statement about someone on a website or sending of emails containing defamatory information to the known contacts of the victim) is covered under section 499 of Indian Penal Code (IPC) read with section 4 of the Information Technology Act. Cyber frauds are also covered under Section 420 IPC. Digital forgery of documents is creation of a document which one knows is not genuine and yet projects the same as if it is genuine. Fraudulent birth certificates, ID cards, etc are dealt with in various sections of IPC and Information Technology Act. Cyber stalking, i.e. repeated acts of harassment or threatening behaviour of the criminal targeting the victim with the aid of the Internet, e-mail, or other electronic communication devices to stalk another person, is a cybercrime as well as a crime under IPC. Cyber pornography, showing of sexual acts can be dealt with under Sections 292 and 293 IPC, Sections 67,67A and 67B Information Technology Act and Indecent Representation of Women's Act.

Crimes committed on a computer network and related to mail: These crimes are technology driven crimes like hacking/unauthorised access, E-mail spamming, or E-mail spoofing. Email spamming means an illegal intrusion into a computer system and/or network. E-mail spamming also means

sending large amounts of mail to the victims because of which their account or mail server crashes. Email spoofing means an e-mail that appears to originate from one source although it has been sent from another source. These crimes are dealt with under Indian Penal Code as well as Information Technology Act.

Crimes relating to data alteration/destruction: computer vandalism, transmitting of virus/worms/Trojan horses/ logic bomb, theft of Internet hours; data diddling, salami attacks- insignificant alteration in customers account which in a single case would go completely unnoticed; phishing, etc. Data diddling is a type of cybercrime in which data is altered as it is entered into a computer system, most often by a data entry clerk or a computer virus. Phishing is a sort of cybercrime often used to steal user data, including login credentials and credit card numbers, etc. Usually, it is committed by a person under the disguise of some trustworthy entity.

Section 43 of the Information Technology Act also provides for civil liability.

Crimes relating to violation of Intellectual property rights- The examples are distribution of pirated software; and cybersquatting i.e., obtaining of a domain name consisting of the owner's distinctive trademark. The traditional laws for protecting intellectual property have also been applicable to the infringements taking place in digital media.

7.5.2 Cyber Crimes: Some Cases

It will be useful for you to know about some cases related to cybercrimes dealing with fake identity, defamation, cheating, and cyber pornography, publishing or transmitting obscene material in electronic form, etc.

SMC Pneumatics (India) Pvt. Ltd. v. Jogesh Kwatra, decided by ADJ, Delhi on 12 February 2014

In this case it was alleged that defendant Jogesh Kwatra being an employee of the plaintiff company had sent derogatory, defamatory, obscene, vulgar, filthy and abusive emails to his employers as also to different subsidiaries of the said company all over the world with the aim to defame the company and its Managing Director. The plaintiff filed a suit for permanent injunction restraining the defendant from doing the above said illegal acts. The Hon'ble Judge of the Delhi High Court passed an ex-parte interim injunction observing that a prima facie case had been made out by the plaintiff and consequently restrained the defendant from sending derogatory, defamatory, obscene, vulgar, humiliating and abusive emails either to the plaintiffs or to its sister subsidiaries all over the world including their Managing Directors and their Sales and Marketing departments. The defendant was further restrained from publishing, transmitting or causing to be published any information in the actual world as also in cyberspace which is derogatory or defamatory or abusive of the plaintiffs.

However, ADJ, Delhi in the judgement dated 12 February 2014 held that "this court is not in a position to accept the strongest argument on behalf of plaintiff under the circumstances in the absence of direct evidence to infer

that it was the defendant in particular, who was sending these emails - the test of balance of probabilities is to be applied to the evidence available on record and not to the inferences". The issue was accordingly decided against the plaintiffs and in favour of the defendant and suit of the plaintiff was dismissed.

State of Tamil Nadu Vs Suhas Katti, AMM Court, Egmore (CC No 4680 of 2004)

This is considered as the first case in India of conviction under Section 67 of 2000. In this case the accused, a known family friend of the victim, was interested in marrying her. However, the victim married another person and that marriage later ended in divorce. The accused started contacting her once again, but she turned down his marriage proposal. The accused took up harassment of the victim through the Internet by posting obscene, defamatory and annoying messages about her in the yahoo message group and then forwarding emails to the victim through a false e-mail account opened by him in the name of the victim. The posting of the message resulted in messages and phone calls from several persons to the victim who also received phone calls by people who believed she was soliciting for sex work.

The accused was found guilty and sentenced for offences under section 67 of Information Technology Act 2000 and 469, 509 of the IPC. The sentence included imprisonment for two years and fine.

National Association Of Software (NASSCOM), vs Ajay Sood and Others,

Decided by Delhi High Court on 23 March 2005.

In this case the defendants were operating a placement agency involved in head-hunting and recruitment. To obtain personal data, which they could use for purposes of headhunting, the defendants composed and sent emails to third parties in the name of NASSCOM. Plaintiff filed the suit praying for a decree of permanent injunction restraining the defendants or any person acting under their authority from circulating fraudulent E-mails purportedly originating from the plaintiff of using the trademark 'NASSCOM' or any other mark confusingly similar in relation to goods or services. Prayer for damages was made in the plaint.

This landmark judgement delivered on 23rd March 2005 brings the act of "**phishing**" into the ambit of Indian laws even in the absence of specific legislation. The court observed that "An act which amounts to phishing, under the Indian law, would be a misrepresentation made during trade leading to confusion as to the source and origin of the email causing immense harm not only to the consumer but even the person whose name, identity or password is misused. It would also be an act of passing off as is affecting or tarnishing the image of the plaintiff, if an action is brought by the aggrieved party."

The defendants in the present case admitted their illegal acts and the parties settled the matter through the recording of a compromise in the suit

proceedings. According to the terms of compromise, the defendants agreed to pay a sum of Rs1.6 million to the plaintiff as damages for violation of the plaintiff's trademark rights. The court also ordered the hard disks seized from the defendants' premises to be handed over to the plaintiff who would be the owner of the hard disks. Defendants, their servants and agents were barred from circulating fraudulent e-mails purportedly originating from the plaintiff or using the trade name NASSCOM or any other name/mark and address of the plaintiff amounting to tarnishing their image.

Activity-1

Go through newspaper reports and identify some cybercrimes dealing with fake identity, defamation, cheating, etc. as discussed above. Follow up the stories and analyse the outcome.

Check Your Progress: 3

Note: 1) Use the space below for your answers.

2) Compare your answers with those given at the end of this unit.

1) Explain the term 'phishing'.

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2) What is Data Diddling?

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7.6 LET US SUM UP

In this unit we discussed various aspects relating to Cyber law such as the concept of cyberspace; the need for regulation of cyberspace; cybercrimes and offences under Information Technology (IT) Act; and the law regulating cyberspace in India.

Today cyberspace has emerged as a new medium of communication, a place where numbers of social and economic activities are going on leading to new challenges and new forms of crimes. Some of these involve computers and networks, where computers may be used as a tool to commit crime or computer itself is the target or computer may be considered as incidental to a crime. Therefore, the role of internet intermediaries, their technical capacity to prevent harm by strengthening cyber security, e-consumer security and in protecting privacy and intellectual property rights cannot be denied. It was

discussed that the intermediaries need to observe due diligence while discharging their duties. The applicable law to govern electronic records and technology driven crimes is Information Technology Act, 2000. It was also explained that many traditional crimes which are capable of being committed with the use or aid of or through computers and technology can also be dealt with under Indian Penal Code, 1860; The Evidence Act, 1872, The Banker's Book Evidence Act, 1891 and the Reserve Bank of India Act, 1934, and others.

7.7 FURTHER READINGS

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7.8 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

Check Your Progress: 1

- 1) Cyberspace is not a physical location but a virtual space. One needs an access device to enter cyberspace. That means one needs some sort of physical access device (may be a computer screen, a telephone, a terminal, etc.) with an artificial processing mechanism, such as digital computing power and/or software. That should be joined with other access devices on a network of physical connections. It enables interaction and communication between individuals and groups of individuals and their creative output, largely independent of time and space.
- 2) Today new communication technologies, usage of mobile phones and other communication devices are globally challenging the traditional notion of jurisdiction. This has led to the possibility of the invasion of privacy of an individual. We need effective law to deal with the problems of cyber social media crimes, rumour-mongering, e-mail spoofing, spams, cyber stalking, defamation and various other cybercrimes as the impact of these crimes can be more than the conventional crimes. These cybercrimes are usually committed by the person using fake identity thus not readily and easily identifiable.

Check Your Progress: 2

- 1) Section 2(1) (w) of Information Technology Act defines Intermediary any person who on behalf of another person receives, stores or transmits that record or provides any service with respect to that record. Intermediary includes telecom service providers; network service providers; internet service providers; web-hosting service providers; search engines; online payment sites; online-auction sites; online-marketplaces and cyber cafes.
- 2) Any person aggrieved by an order made by controller, or an adjudicating officer can file an appeal to a Cyber Appellate Tribunal having jurisdiction in the matter, within forty-five days of receipt of the copy of the said order. However, no appeal shall lie to the Cyber Appellate Tribunal from an order made by an adjudicating officer with the consent of the parties

Check Your Progress: 3

- 1) Phishing is a sort of cybercrime often used to steal user data, including login credentials and credit card numbers, etc. Usually, it is committed by a person under the disguise of some trustworthy entity.
- 2) Data diddling is a type of cybercrime in which data is altered as it is entered into a computer system, most often by a data entry clerk or a computer virus.

UNIT 8 PROMOTION OF ALTERNATIVE MEDIA

Structure

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8.0 INTRODUCTION

Digital technology has changed the ways of communication, the forms of media and media processes and most of society itself. Every media form is essentially 'digital' in the new media environments. Although the traditional media forms such as newspapers, magazines and broadcast media are still structured into a 'one-way' news processing mode, however with the very characteristic of interactivity, the digitalisation of media provides everyone with an opportunity to inform others, to make it two-way. It creates a more inclusive media experience with digital media processes where people can consume media and participate in producing the content.

Alternative media practices are possible with increased access to digital technology, particularly through internet-enabled smartphones, enabling users to create audio-visual content and its easy distribution on social media. Today, with interactive digital media platforms, news and information processes facilitate alternative gathering, writing, publishing, and dissemination methods. With this, a newer form of journalism can be

observed, published and distributed on social media sites and platforms such as YouTube, Facebook, Twitter, and Instagram. Such content is also distributed on chat apps like WhatsApp and Telegram.

However, social media is one part of digital media and a larger audience, and marginalised sections still lack access to digital participation. Against such a backdrop, there is a need to understand whether digital media is qualitatively or positively providing the way to alternative media or not. To reach the answer to the question, we will have to understand the meaning and the need for alternative media and the contents of alternative media. Also, critical questions need to be answered, such as who owns and controls the technology. Is there any relationship between the ownership of technology and control of the content? Who are the producers and consumers of alternative media content? In our endeavour to understand how digital media promotes alternative media, we will also be looking at some good practices and cases of alternative media so that we may remove the obstacles and use the insight to strengthen media practices towards an inclusive society.

8.1 LEARNING OUTCOMES

After completing this Unit, you should be able to :

- Understand and define alternative media;
- Know the importance and need for alternative media;
- Describe the forms and processes of alternative media;
- Explain the issues and concerns related to the content and audiences of alternative media;
- Evaluate the alternative media practices and sustainability;
- Critically analyse the issues of ownership and control in alternative media; and
- Assess the role of alternative media in society.

8.2 UNDERSTANDING ALTERNATIVE MEDIA

Alternative media is a comparative term. It has to be seen in comparison to, let us say, mainstream media. Generally, it is observed to be the media of the people who do not find a place in mainstream media, located at the margins or not a part of the 'centre'. Thus, alternative media is important to give a voice to the voiceless. Also, it is complementary to the mainstream and essential to bridging the gaps and making society inclusive. However, to understand the need for and the processes of alternative media, we must define and conceptualise alternative media about the whole media landscape.

8.2.1 Concept and Definition

Since there is no concrete definition of alternative media (as discussed above), multiple definitions define it based on its role and functions in society. For example, in Oxford references, alternative media has been defined broadly in three ways: "community press" used by "minority groups

for campaigning"; "radical media" used for "political messages" and media "other than mainstream" for promotional purposes.

To elaborate, alternative media work as a 'supplement' to the mainstream media in such structures where either access to the mainstream media is not provided or representation is not inclusive of all the social, economic, cultural or political groups. Usually, alternative media processes include traditional, "relatively open and unedited" content.

Participation is present in almost all forms of community media" as part of alternative communication. (UNESCO cited in Lewis, 1993, 12) Because community media evolves within minority groups, small communities, or subcultural groups within communities, they may be confined to specific geographic locations for specific purposes, such as awareness campaigns on particular issues and protest drives against issues related to civic amenities, etc.

Radical press or content forms such as graffiti, political newsletters, pamphlets, etc., are also considered part of alternative media. It is used by political groups or parties that feel underrepresented by the 'corporatised' mainstream media systems to spread their political messages.

As a marketing strategy, promotional tools and content for a product are sometimes categorised as alternative media. It includes cinema, music, and writings considered 'out of the 'information-based' mainstream content.

Thus, to define alternative media, one can ask, what is the alternative to what? Moreover, how is it different from the compared one? According to Atton (2004), Alternative media should be fundamentally grounded in the cultural forms of an independent media outlet. Alternative media should also possess some if not all, attributes: a reliance upon modern, evolving technology; de-professionalised organisational norms and roles; horizontal communication patterns; cultural and political radical content; innovative and independent distribution practices; and a compelling aesthetic form. (cited in Kenix, 2011).

Besides this, alternative media can also be defined based on the production process. Looking at the content distinction, alternative media content is often comprised of different types of news stories and information-based content given in storytelling formats (traditional and modern) focusing on the needs and goals of a particular situation of a specific locality meant for local audiences.

8.2.2 Need for Alternative Media

In consumer societies, mass media often offers profit-driven content, ignoring the need-based content. This may include human rights, linguistic/cultural rights, the plight of people experiencing poverty, etc. For a long time, such issues have been ignored, underrepresented, or misrepresented by the mainstream media, keeping some people at the social margins. Against this backdrop, communities and sections of society start using media themselves with the help of traditional practices or modern

technology-supported small-scale media ventures. If we look at the broader picture, the trend is not limited to the communities within a geographical area; we can notice it regarding economic or political movements for freedom. We can take the example of developing nations with special needs for communication that are not represented in international media, the newly emerging political demands of native peoples in North America, or the needs of refugees in Western European nations to create socio-cultural realities for themselves.

We can borrow Denis McQuail's preposition of normative theories of press to include development media and democratic-participant media theories as a framework to be added for a need-based media approach along with the other four theories, i.e. Soviet media theory, authoritarian media theory, libertarian media theory, and, social responsibility theory of media. According to McQuail, individual citizens and minority groups must have the right to access the media, which must serve their specific communication needs, such as education, health, development, etc., and should not be controlled by the market or the state. In a participatory form, such media would be small-scale, interactive and decentralised to challenge the conventional gatekeeping process of mainstream mass media. "Democratic, grassroots involvement in small-scale media enables people to formulate their definitions of needs and goals, and, in Nyerere's phrase, 'develop themselves'." (1973, p. 60)

In contemporary times, in the digital media environment, alternative media may enrich media plurality by paving the way for civic engagement and participation in citizen journalism worldwide. This can lead to a true public sphere and "fills the gaps left empty by many mainstream media narratives" (Russell, cited in Turner and Saber, 2016). Because it will widen the evidence-based journalistic content for citizens "to make informed choices and hold their governments to account" (Coulson, 2013). The strong alternative media base also supports the media ecosystem by countering misinformation and disinformation that affect the cohesiveness of any society. Also, media plurality streaming into the media system may help combat filter bubbles and echo-chambers where audiences are exposed only to content that aligns with their existing belief or ideology.

In Lewis's words (1984,1), the need and role of alternative media can be concisely put as "expanding the services of mass media, challenging mass media systems and their implications. Offering alternatives to mass media systems, doing things which mass media systems cannot do." Addressing this issue requires a collaborative effort from platforms, users, and society.

8.2.3 Digital Media and the Forms of Alternative Media

The advent and development of digital media have provided a way to converge all traditional media forms into digital forms. "Digital platforms can now be regarded as key participants within the broader framework of news media; they may not be publishers, but their roles as distributors are increasingly hybrid in nature." (ABC, 2018, p. 6) With the continuously increasing spread of digital media, we witness the digital editions and additions of what used to be seen on the streets. For example, forms such as

community newsletters, fanzines, pamphlets, posters, graffiti, street theatre, and puppetry are presented as digital art, films, and content as part of alternative media. "Alternative media have been so widely divergent in their approach and execution of storytelling and news reporting" (Kenix, 2011,17)

Nevertheless, it is not only the 'traditional' digital; digital media provides many more avenues for alternative media practices, particularly on social media platforms. Social media has become an alternative 'public space' to voice concerns without 'margins'. Some newer forms of alternative media are evolving. For example, short-form video content or 'reels', live streaming of the content/events, and personalised interactive content.

Short-form content: Reels are short, engaging videos. "This format's success can be attributed to its ability to convey information, entertainment, and creativity in a concise and visually appealing manner. User-generated content is catching up in popularity and ease." (Sridharan, 2023). For example, Instagram reels and YouTube shorts.

Long-form content: Weblogs/blogs, video blogs, podcasts, etc., are long-form content published online. Blogs are text-based articles and information pieces written and combined with multimedia-supported content and hyperlinks. As the name suggests, video blogs are audio videos produced for social media consumption. Similarly, podcasts are audio programmes (now available in video formats).

Community engagement on Social networking platforms: Social media platforms such as Facebook and LinkedIn provide the facility to create social media pages for community or group engagement. These pages may be kept open for public access or restricted to the members. You may publish various content, from articles and videos to information and announcements. The 'followers' of the group may actively participate by commenting and responding to the content and even for **live streaming** of certain events. Thus, social media platforms disseminate information and foster online communities.

Digital streaming: Although on-demand digital streaming platforms such as Netflix, Zee5, Amazon Prime Video, etc. are so far proving to be an 'alternative' to the theatre for film watching, they can also be a source of alternative media content in the form of films and series made on themes concerning the lives of marginalised communities/individuals.

Check Your Progress: 1

Note: 1) Use the space provided below for your answers.

2) Compare your answers with those given at the end of this unit.

1. List three digital media content forms used by alternative media with examples.

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8.3 CONTENT AND AUDIENCES: ISSUES AND CONCERNS

The more we are facilitated by digital technology, the more challenges we face concerning the credibility and authenticity of the content and the purpose of the people sharing the content behind the face of a community. Today, when the information is being fed into the 'networks' of the internet, increasingly, online communities are posing as alternative media platforms, specifically coming in the "roles of new media 'watchdog', 'fact-checker' and 'critics', creating "a new information asymmetry". Let us understand the challenges at the level of content and audiences in the environment where the audiences, increasingly, are taking the role of producer in addition to the producer.

8.3.1 Understanding the Needs of Audiences of Alternative Media

To understand the needs of the audiences of alternative media, we have to seek answers to the following questions first:

- Who are the audiences of alternative media?
- How do they access and use the content of alternative media platforms?

Let us borrow the conceptual frame given by Denis McQuail (2016) to bring an understanding of the audience, who sees audiences originating "both in society and in media and their contents" (250). With a need-based approach to media content, we see how media content fulfils the information needs of communities and societies. Here, the audience acts as a 'target group' for media content and shares "at least one significant social/cultural identifying characteristic – that of shared space and membership of a residential community." (McQuail, 2016, p. 409). Thus, the audiences of alternative media are more locale and distinctive in structured group formations. For example, women as a community, individuals with disabilities (or special abilities), rural audiences, etc.

We can find the answer to the second question in the practices around media today. "new media have opened up new opportunities for the formation of very small audiences based on many different aims and identities and with the advantage of being able to serve very dispersed groups." (McQuail, 2016, p. 409) However, to make the optimum use of new media, we have to examine whether the individuals and groups at the margins can access the new digital media to make it an alternative voice. Therefore, the foremost need of audiences would be the 'access' to the 'open' or "commons" "available to anyone who wishes to participate in the networked information environment outside of the market-based proprietary framework." (Benkler, 2006 cited in Goggin, 2011, 157) Here, we can cite Seshu (2016), for example, "In India, most NGOs working with women realised that an online presence in the form of blogs, websites, and accounts in social networking sites was an important and necessary extension of the work they did offline." (250)

Access to technology-driven media alternatives transforms the 'passive' audience into an active audience by prompting them to engage in activities such as commenting, sharing, editing and adding to the existing content. To access the need-based information, the audiences of alternative media use search engines and look for content in the form of podcasts, blogs, short videos, etc., that brings not only the local problems to the fore but also make people aware of their rights, sense of belonging and much more.

8.3.2 Journalistic Practices: Mobile Journalism, Citizen Journalism, and Community Journalism through Virtual Communities

The ease of accessing internet-based digital devices has increased users' participation through two-way communication, which is possible in new media. Smartphones, especially with camera and microphone capabilities, have opened a new world of possibilities for common people to create and produce content recognised as part of alternative voices.

Handy mobile phones and faster internet speed enabled reporters to reach remote areas with comparative ease. Producing and consuming news using mobile phones is called MOJO or mobile journalism. MOJO has dramatically changed the traditional media scenario. Today, the technology is used by big media houses for live reporting and sending reports of such events, which the heavy camera setup cannot cover. By shifting to the 'digital', the media houses are practising 'digital' for news gathering, processing/producing, and distributing. For example, there has been a shift from cable news channels like Al Jazeera USA to 'mobile and online content providers'. Crowdsourcing, advanced search to find more news sources, and a content management system (CMS) to increase the reach and provide the content either on the individual app or using social media platforms/apps are all part of news processes as part of MOJO.

However, the access of common people to the same digital devices, such as accessible, inexpensive smartphones, open-access software, and social media platforms that enable them to interact with the content, extends the journalistic activity from mobile journalism to citizen journalism. Consumers of news on such platforms sometimes add information or edit information by commenting on the existing content. Thus, "mobile journalism is an ongoing conversation between journalists and users" that extends to citizen journalism. (Steve Hill and Paul Bradshaw, 2019). Therefore, when we discuss events like the World Trade Centre attack of 9/11 in the USA or the London bombing of 2005, we acknowledge the alertness of the citizens who captured the event on their handy cam and mobile phone. Nevertheless, with more direct participation in journalistic content production, the scholars define citizen journalism with the notion that "the person doing the reporting is independent and does not work for a media organisation." (Hinton & Hjorth, 2013, p. 65)

Today, we have ample examples of individual initiatives as part of citizen journalism. Amateurs, journalists, and activists produce journalistic content through blogging, live tweeting, video blogging, etc. Darnella Frazier, the

recipient of the Pulitzer Award, 2021 (Special Citation), set such an example by "courageously recording the murder of George Floyd" on her mobile phone and showing it to the world through social media.

Citizen journalism takes a collaborative sustaining practice when supported by the community. Therefore, we can define community journalism as the next level of citizen journalism. In the past, citizen journalism has been supported by the help of non-government organisations and self-help groups, and there are a few examples where local bodies of pro-active people have been participating in community journalism with social media platforms. Nevertheless, the major power of the internet lies in the widespread network of people, which it made possible globally. It extended citizen journalism to community journalism at almost a top level, where like-minded people with similar interests unite to raise a voice on certain issues. Campaigns such as 'Black Lives Matter' built and gained momentum after the George Floyd murder case because of the 'online activism' of the 'community of interest' online.

8.3.3 Prosumers: Participatory and Interactive Consumers

To understand how digital media promotes alternative media and journalistic practices, we can look at how the nature of consumers or users of media is increasingly transforming or shifting from being 'consumers' to 'prosumers'. Access to production-based activities and 'open publishing' "eroded [d] the dividing line between reporters and reported, between active producers and passive audience". (Edwards, 112) Internet-based technology allows user-generated content (UGC) to be used in a two-way communication process with user-friendly interfaces. This created a new audience that participated proactively. "Producers", as a combination of the two, i.e., producer and user, is a more sociological perspective to look at today's participatory media practice. The term was coined by Australian academician Axel Bruns (2008).

This is also indicative of the shift from anonymous 'mass' audience to 'individual' audiences as a frame of reference (Athique, 2013), a digitally empowered consumer, conceptualised by Alvin Toffler (1980) in his book *The Third Wave* as a "prosumer". The consumers of the content are engaged in activities like video content production, skilled consumption to gain professionalism, and 'amateur professionalism'. "As this power shift becomes embraced commercially, the new centrality of prosumers to the digital economy is exemplified by the amateur video-sharing site YouTube and the participatory culture that it facilitates" (Burgess and Green, 2009, cited in Athique, 2013, 165). "A prosumer is not simply a consumer of digital services, but also a designer of digital artefacts, such as weblogs, digital music, video clips, game mods and so on." (Athique, 2013, 45)

With "empowered choices armed with ready information", ordinary citizens are gaining knowledge and entering into the domains previously limited to the professionals. (Athique, 2013, 44) "What becomes clear in such accounts is how small media organisations can engage with the mainstream to get alternative grassroots viewpoints expressed...central to the approach is dialogue and persuasion rather than control. (Edwards, 113)

8.3.4 Issues in Planning, Managing and Sustaining the Medium: Cases

Social media platforms enable citizens to journalistic content and make aware that citizens are using social media for governance, as we find in the rural communities of Rajasthan's Goner village, where people make small videos, write text content and post it on social media platforms such as X (formerly Twitter) for public view and specially meant for governing bodies for solutions (Sharma & Feigelson, 2023), as “relayed pieces of information” on social media (Burgess and Green, 2009 cited in Athique, 2013, 168) Nevertheless, there are a few examples of community and alternative media which are sustaining as a true journalistic ‘experiment’ if not ‘experience’. Following are such cases to understand the issues of planning, managing and sustaining alternative media with the help of digital media:

Khabar Laharia (India): India’s first digital rural news network, run by 30 women reporters and stringers in 13 Uttar Pradesh and Madhya Pradesh districts. One of India's oldest community media organisations, Khabar Lahariya, is a case of transformation from a newspaper to an online "hyperlocal channel" working through a website and YouTube. The organisation claims to have more than 5 million viewers on multiplatform news channels. The organisation trains rural women in journalism and production skills, like storyboarding and shooting using smartphones, for 6-8 months. Due to low production costs, these women can send more stories to the Delhi offices for editing and online distribution, and this is how they increasingly adapted to increase the network of rural women in community journalism.

Community Initiative by Chicas Poderosas (Latin America): It is a not-for-profit organisation operating across Latin America, USA and Europe. Founded in 2013 by Mariana Santos, the community found a new pace with the 'Training the Trainers' event in 2015. Chicas Poderosas provides female journalists with the needed journalistic tools and skills in a collaborative structure. (Vuyst, 2020) To sustain the media initiative, the community runs journalism workshops and digital literacy programmes to strengthen the distribution channel. “The digitally literate Chicas Poderosas core team uses file sharing and collaborative working tools like Slack. These skills are then passed on to communities, to ensure best practice but also ease of collaboration, using the same platforms” (Turner & Saber, 2021)

There are an increasing number of cases of community and alternative media today, where educational institutions (especially in cases of community radio initiatives) and NGOs (other alternative media practices and advocacy) are joining in collaborative efforts with marginalised sections and neighbourhoods towards sustainable planning and management of communication practices with an adaptive use of digital technologies. For example, some of these organisations are also shifting to apps and other cost-effective digital tools rather than websites, which are expensive to run and reach a wider audience.

Activity 1

Identify any community media initiative of your locality and observe:

- How it is using digital media platform/s.
- Make a list of such platforms.

Indicate what forms of content are being used by the community media.

Check Your Progress 2

Note: 1) Use the space provided below for your answers.

2) Compare your answers with those given at the end of this unit.

1. How is citizen journalism different from mainstream/conventional journalism?

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2. Who are 'prosumers'?

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8.4 ALTERNATIVE MEDIA: OWNERSHIP AND CONTROL

Participation and inclusion of the marginalised, unheard voices in the frame of media is how alternative media can be described. However, in doing so, it needs 'ordinary' citizens at the decision-making level in organisational and managerial roles to own, if not 'control' such alternatives, as UNESCO's Third Medium-Term Plan (1990-1995) states about the alternative forms of communication, that the media may be consciously alternative in their way of operating through their organisational structure. Let us try to understand the issues, challenges, realities and solutions for achieving such a participatory media system.

8.4.1 Understanding Different Ownership Patterns: Critical Theories

In his book, *Social Media: A Critical Introduction*, Christian Fuchs provides an array of critical postulations given by different scholars on social media. These can be clubbed broadly into the critical theory tradition as the following:

Political Economy theory looks at information production, distribution and consumption from a 'power-relation' perspective. For example, social media platforms like Facebook, X, etc., own and control the mechanism of the platforms while the users only create/produce the content. Terranova (cited in Fuchs, 2014) calls it "Web 2.0 is based on the exploitation of free labour". Also, Lovink (2008) asserts the need for economic and revenue models to bring parity for alternative/participatory media producers for their economic viability.

Extending the political economy of digital and social media online, Fuchs (2008, 2010, 2014) points out how media corporations (like the old system) exploit and 'sell' the audiences to advertisers. "Internet users who form an Internet prosumer/producer **commodity** and are part of a surplus-value generating class that produces the commons of society" are, thus, the **products for the advertising market business**.

The "notion of sharing" and other activities on social media platforms such as Facebook, mystifying the logic of profit, advertising and commerce" (John 2012 cited in Fuchs, 2014) can be seen in the broad spectrum of **Cultural Industry theory** as all such activities play a part of 'cultural capital' where everyone wants to own (here, act) to follow the fashion or trend, which ultimately result in the increasing profit of the corporates.

Similarly, there is a **techno-determinism** perspective, where social media is seen with "techno-deterministic ideologies" and "internet-centricism" (Morozov, 2011) that run the society. On the other hand, the notion of the **digital divide** indicates the apprehensions controlling access to function and ownership by controlling the algorithm through content management systems (CMS), having an independent/personal digital tool by a few compared to others.

8.4.2 Democratising Ownership

The digital spaces and the increased access to them have certainly democratised the 'audiences' towards the 'right to know'; however, 'democratising ownership' is still a goal to achieve. As we discussed the critical theories, we now know that a three-fold system has to be adopted to make the ownership of alternative media of digital spaces democratic in nature:

1. **Accessible infrastructure mechanism:** A self-reliant internet-based digital infrastructure with more start-ups and app developers in the country can facilitate alternative media.
2. **Inclusive organisational structure:** The 'sustaining' alternative media organisations reflect optimism about the training they impart to remote and marginalised areas. However, true participation emerges when they are trained to acquire decision-making roles. Therefore, non-hierarchical, local democratic journalism should be practised with the help of tenure-based training from time to time for equal and collective decision-making powers in editorial policy decisions.

3. **Support system by all actors and stakeholders:** Although alternative media has been seen as an 'alternative', 'oppositional' media to the mainstream, however, as we have seen throughout the discussion, it is a supportive, complimentary and supplementary medium to not only the 'mainstream' media but also to the 'good governance', hence, all the societal stakeholders must come forward to make such initiatives more democratic. As Tewksbury and Rittenberg (2012,169) say, “[t]here may not be a new world order – media corporations and political elites will likely always garner the lion’s share of the audience – but important components of mass society will change (and have changed already)”.

8.4.3 Revenue Models of Alternative Media

Whether it is an individual citizen journalist or the reporters working in a community setting, they need some economic support to sustain their journalistic practice. It has been noticed that such initiatives manage to start with funding from donors; however, they fail to continue in the long run. To avoid that, community-based media organisations are exploring revenue models today to encourage citizen reporters to keep producing high-quality content. This includes horizontal integration, networking, and experimenting with content, apart from a simple subscription and/or donation model to generate revenue.

First, we can see the example of *Khabar Lahariya*, which uses a horizontal integration model with online expansion for urban digital audiences and the 'offline' newspaper for the rural community. The organisation Chambal Media (which manages the revenue for the community media project) has kept the original newspaper *Khabar Lahariya* intact in its earlier form since it has a base of audience and credibility.

On the other hand, purely online community-based organisations, such as Chicas Poderosas, look for more collaborations beyond funding. Through networking, such organisations can gain recognition as the 'global face' of alternative media. Thus, with diverse perspectives, they can achieve financial and resource support from other countries.

Nevertheless, gaining audiences for serious content of alternative media is the real challenge in digital media environments where algorithm, number of clicks and views, Search Engine Optimization (SEO) and CMS are still the deciding factors for revenue generation. In such a situation, organisations and alternative media initiatives are experimenting with the content forms to the extent of 20-30 per cent of the total content to include such stories that may attract audiences easily.

Lastly, we can add the ‘responsibility model’ of revenue by adding social actors to this list, as mentioned in the AC report of 2018:

News is a public good - it serves a purpose beyond the immediate needs of advertisers and consumers- but monetising that 'good' is difficult. Hence, it has traditionally needed a cross-subsidy in the form of advertising or, in some cases, government support. (p.4)

Check Your Progress: 3

Note: 1) Use the space provided below for your answers.

2) Compare your answers with those given at the end of this unit.

1. List three ways through which the ownership in alternative media systems can be democratised.

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8.5 ROLE OF ALTERNATIVE MEDIA IN SOCIETY: CRITICAL APPRAISAL

A democratic society develops with information dissemination and awareness that stream through diverse media. Digital media has enhanced the chances of media plurality with more participation from all stakeholders. However, certain grey areas need to be worked on. First, alternative media organisations face challenges from the corporate social media platforms and sites (the major distributional channels for such organisations) concerning monetary interests, data management and control. Secondly, some media initiatives, running essentially through online communities, face serious transparency and trust issues due to their filtration policies and communication strategy to promote only a single view/perspective. Highly political, such communities lead to the formation of filter bubbles, failing the core objective of alternative media.

Not to forget, “journalism has multiple roles: it monitors and curbs power; it supports and creates public debate; and it educates and entertains” (Accc, 2018) by incorporating increased crowdsourcing, transparency and accuracy as an essential part of training, alternative media shall contain all the ethical principles which assert the diversity of perspectives. Also, this will enable 'networked journalism' that incorporates both trained journalists and citizen journalists, enjoying the strengths of both forms of news gathering and reportage (Bruns et al., 2009,205).

Activity 2

Identify any one alternative media initiative in your locality. Critically examine it for:

- the inclusivity of organisational structure
- the inclusive representation in the content

Write a report in 300 words.

8.6 LET US SUM UP

In this Unit, we discussed various concepts and perspectives on understanding alternative media, and thus, we attempted to define alternative media. The social structure was explained to understand the need for alternative media. With forms of digital media platforms and content, we were able to see and locate how alternative media practices are being adapted to new media environments. We discussed various digital media forms, such as short forms like shorts and reels and long forms like blogs and podcasts. Also, we learned about social media spaces for community engagement that are utilised for alternative media projects.

The advent of new media technologies has transformed the production of journalistic content and the nature of audiences. By facilitating two-way communication in mass media structures, audiences are also prompted to participate in content production proactively. This led to newer forms of journalism, such as mobile journalism (MOJO), to enrich and widen the scope of citizen and community journalism. Thus, prosumers are the new actors in the media process. However, there are challenges in planning, managing and sustaining alternative media initiatives. We tried to understand the good practices adopted by certain community media initiatives in this regard in the Unit.

We discussed the issues and challenges of ownership and emerging patterns with the help of various critical theories and tried to find possible solutions. With a practical approach, we see how various media organisations from the alternative media arena are emerging with adaptive revenue models for economic sustainability. We hope the discussion will enable you to critically examine the role, function, and structures of alternative media initiatives in society and assess them as part of the efforts to democratise the media spaces in this digital age.

8.7 FURTHER READINGS

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8.8 KEYWORDS

User-Generated Content: Content produced by the users or audiences of internet-based media platforms/sites.

Filter bubble: The process of limiting the content a person can see and

access through personalised searches, recommendation systems, and algorithmic bias inherent in the internet-based media system.

Crowdsourcing: Seeking information, input or news story ideas from people on social media or internet-based platforms/websites.

8.9 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

Check Your Progress: 1

1. The three digital media content forms used by alternative media are:
 1. Short-form content such as – short videos. For example, Instagram reels, YouTube shorts, etc.
 2. Long-form content, including long videos/documentaries and articles. For example, blogs, V blogs, podcasts, etc.
 3. Page-based content meant for community engagement. For example, Facebook page and discussion forums on other social media platforms to connect and engage with more people.

Check Your Progress: 2

1. While mainstream media is based on a more structural and organisational structure limited to professional journalists and media owners, citizen journalism is open to more direct participation in journalistic content production by all common citizens. Citizen journalists are independent reporters who do not work for a formal media organisation.
2. Prosumers are proactive users of internet-based digital platforms/sites who produce content and actively participate in online communication processes.

Check Your Progress: 3

1. The three ways through which the ownership in alternative media systems can be democratised are:
 - a) Accessible infrastructure mechanism
 - b) Inclusive organisational structure
 - c) Support system by all actors and stakeholders



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