

New Trends in Education e-learning



8.1 e-learning : Concept and Characteristics

8.1.1 Concept

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Concept, Threats and Remedies

8.4.1 Concept

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Introduction

Education is a continuous process. The education system is also updated as per the changes occurring in human life. The trends which occur in our daily life, get reflected in the education system too. Today we are living in the world of information technology and its impact is seen in all the areas of our life. Consequently it has also impacted our

education system. Information technology is used to make teaching-learning-evaluation effective thereby increasing the standard of our education. e-learning is one such new trend which guides and provides a direction in using technology effectively for learning. This new trend is discussed in this chapter.

8.1 e-learning : Concept and Characteristics

8.1.1 Concept



Let's Tell

From the following list which electronic tools do you use? (Make a ☒ Mark)

• Television set	<input type="checkbox"/>	• Tablet/Tab	<input type="checkbox"/>	• D.V.D.	<input type="checkbox"/>
• Radio	<input type="checkbox"/>	• Smart watch	<input type="checkbox"/>	• CD	<input type="checkbox"/>
• Mobile	<input type="checkbox"/>	• Printer	<input type="checkbox"/>	• Pendrive	<input type="checkbox"/>
• Laptop	<input type="checkbox"/>	• Scanner	<input type="checkbox"/>	• Memory card	<input type="checkbox"/>
• Computer	<input type="checkbox"/>	• Digital camera	<input type="checkbox"/>	• Projector	<input type="checkbox"/>



Keep in Mind

Learning which takes place with the assistance of electronic tools is called as e-learning.

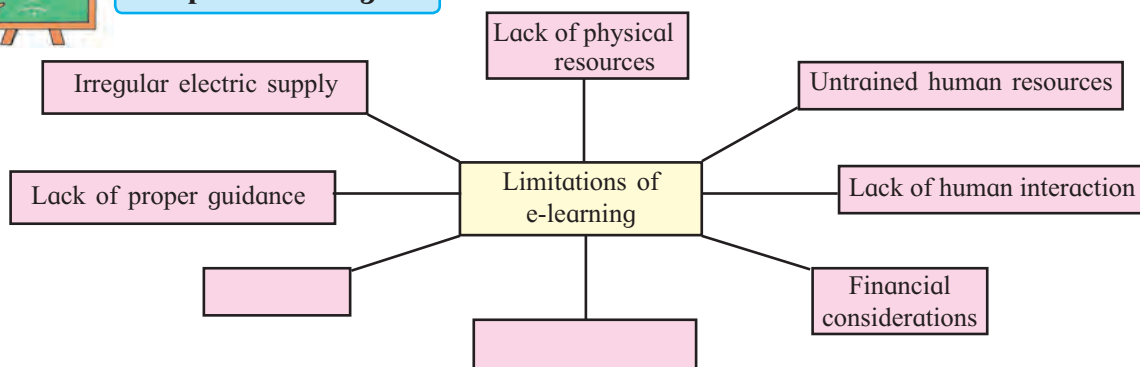


Discuss

For what purpose do you use the above tools? What are their benefits?



Complete the Diagram



8.1 : Limitations of e-learning

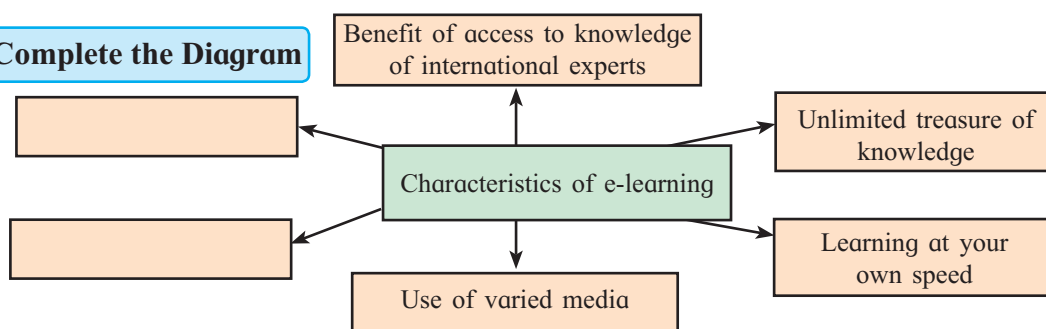
8.1.2 Characteristics

e-learning takes places with the help of the computer and internet. The smart phone is also a form of modern computer and it is easily available anywhere. The easy availability of the computer and the internet everywhere has helped universalization of e-learning. e-learning is complementary to the traditional form of learning.

Complete the following figure and then explain in brief the characteristics of e-learning.



Complete the Diagram



8.2 : Characteristics of e-learning

8.2 e-learning Tools :-

8.2.1 Online Tools :-



Let's Recall

- Write down the names of the websites you know.

- www.maharesult.nic.in

- www.mhrd.gov.in

- www.ebalbharati.in

- www.google.com

- -----

- -----

- -----

- -----



Do you Know?

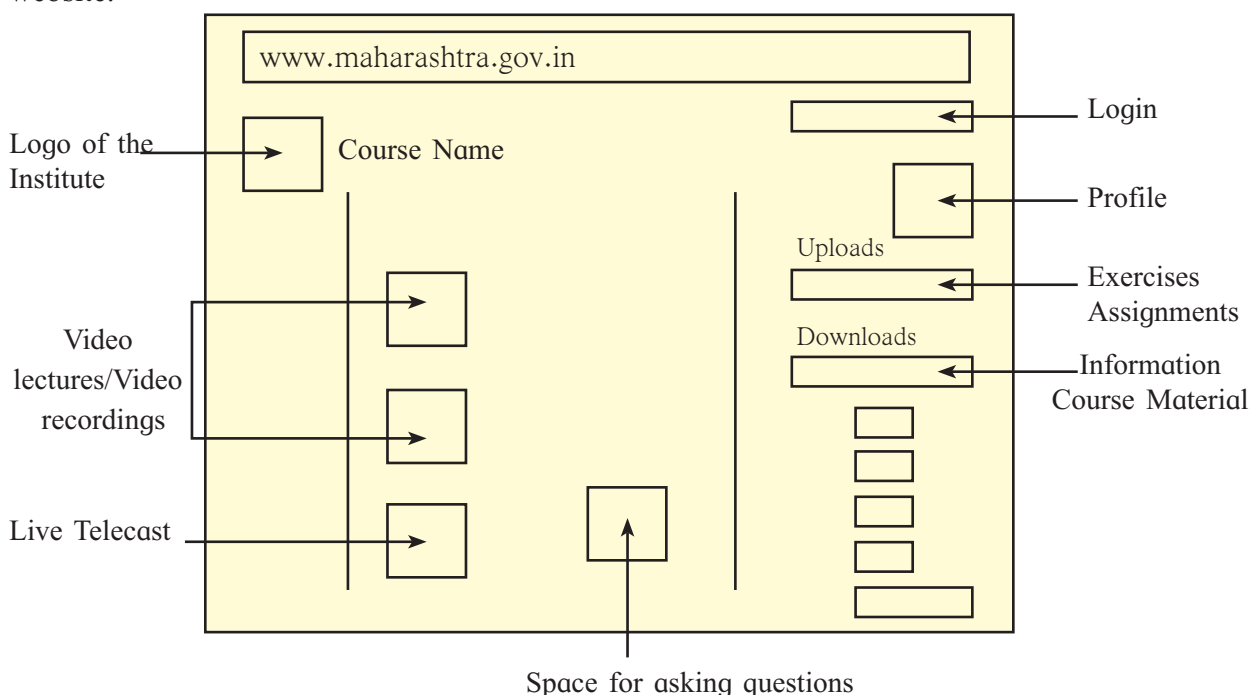
- There are more than 100 crore websites in the world. (www.internetlivestats.com)
- The first website in the world was published in the year 1991.
- In the website address https:// and http://, the letter 's' indicates that the website is more secured.
- Websites having the extensions '.ac', '.gov', '.edu', indicates that these websites are academically more reliable.



Remember it

8.2.1.1 Website :

A collection of pages on the world wide web which has a common address, specific content is called as the website. Learning that occurs through the website is called as web based learning. This type of learning is called as e-learning or online learning. Institutions that offer online courses conduct all the processes right from admission to the result through their website.



8.3 : Structure of Website offering web-based learning

8.2.1.2 Mobile Apps :-

Put ☒ Mark, from the following which mobile apps do you use?

- | | | | |
|------------------------------------|--|---|---|
| <input type="checkbox"/> Whatsapp | <input type="checkbox"/> Google maps | <input type="checkbox"/> email | <input type="checkbox"/> Youtube |
| <input type="checkbox"/> Facebook | <input type="checkbox"/> Educational apps | <input type="checkbox"/> On-line shopping | <input type="checkbox"/> QR code reader |
| <input type="checkbox"/> Instagram | <input type="checkbox"/> Photo editing | <input type="checkbox"/> Twitter | <input type="checkbox"/> Dictionary |
| <input type="checkbox"/> Antivirus | <input type="checkbox"/> Online ticket booking | | |



Think and Share

Which mobile app do you use the most? Why?



Do You Know?

Mobile App is a type of application software which can be used specifically on the mobile only. In a smart phone various facilities are given through various Mobile Apps. eg. educational games, photo, maps, social media, health, shopping, entertainment etc.



Search and Complete the Table

Write names of three mobile apps for each of the following given subjects :-

Sr.No.	Subject	Name of the App
(1)	Marathi	
(2)	Hindi	
(3)	English	
(4)	Science	
(5)	Mathematics	
(6)	History	
(7)	Geography	
(8)	Drawing	
(9)	Craft	
(10)	Physical education	
(11)	Dictionary	
(12)	Encyclopedia	



Discuss

How can e-learning take place by using the above apps?



Remember it

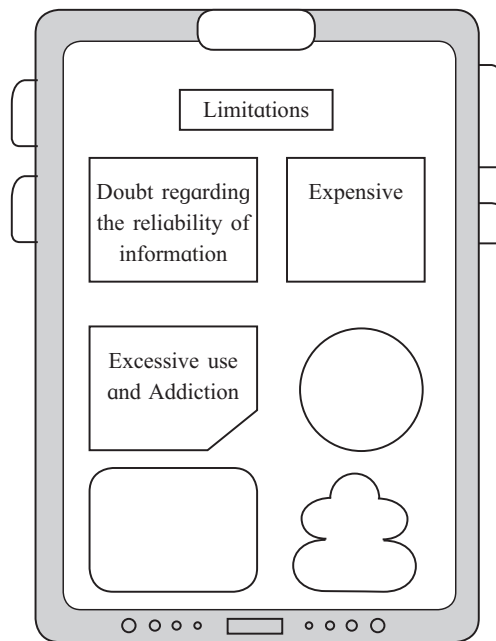
Which facts from the following do you know? (✓ Mark)

- (1) Downloading an app from an authorized play store is secure. ☐
- (2) Every mobile app collects and saves all the information available in our mobile with our permission. ☐
- (3) The security and confidentiality of the information in our mobile can be at risk due to mobile apps. ☐

Limitations of e-learning through mobile app :-



Complete the Diagram



8.4 : Limitations of e-learning through mobile app

8.2.1.3 e-library

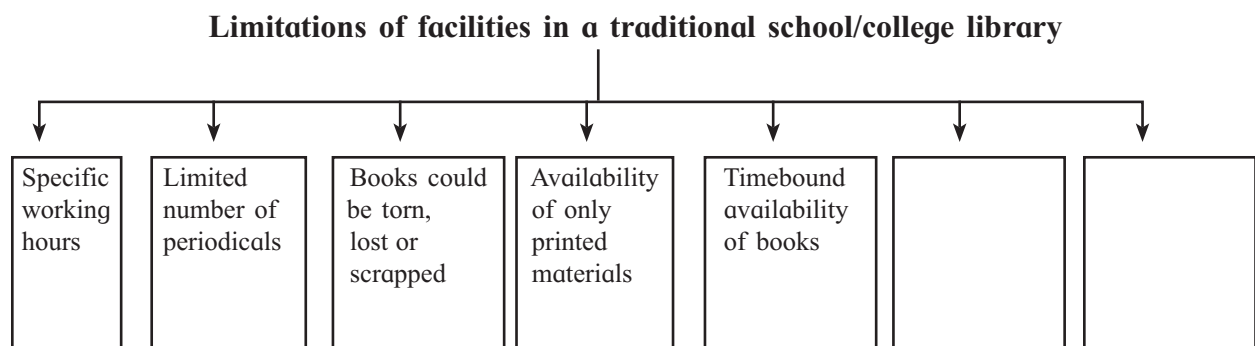


Let's Recall

Have you ever experienced that you were not able to get a particular book from the school/ college library and had to return empty handed? What could be the possible reasons of unavailability of the book?



Complete the Diagram



8.5 : Limitations of facilities in a traditional school/college library



Imagine and Discuss

- You are able to get the desired book at the desired time.
- You don't have to worry regarding handling of the book.
- You have access to variety of books of various publications even on holidays.

- Books of wellknown authors both national and international level are available free of cost.
- Multimedia books are available along with printed books.
- There is no hurry to return the books.
- There is no worry about books getting torn or decayed.
- You have the facility to carry and read the books anywhere any time.



Remember it

Library which has all the above mentioned benefits and which can be accessed through various online media via the internet is called as e-library. It stores and provides e-books. e-library provides e-books to its readers through a specific website and apps. Some e-libraries provide services free of cost while some offer paid service. e-library provides various sources of knowledge like e-books, e-videos, documentaries, short films, movies, audios, animations, etc.

Websites of Some e-Libraries

- www.nationallibrary.gov.in
- <https://unesdoc.unesco.org>
- www.inflibnet.ac.in
- www.cart.ebalbharati.in/



Do This

With the help of your teacher take membership of any e-library and share your experience with the class.

8.2.1.4 Blog



Let's Tell

Which websites do you use to collect information?

Various professional, educational, political, social, government etc. institutions use their websites to communicate the information to the people.



Let's Understand

Any individual can communicate his/her thoughts and knowledge with the people through website. But they might face the following difficulties while doing it.

- Expenditure has to be incurred for developing a website.
- Expenditure has to be incurred for publishing a website.
- Annual charges are to be paid to renew the publication of the website.

For overcoming these difficulties the online publication tool, namely 'Blog' is used.



Do You Know?

The term Blog has been derived by joining the two words namely web + log. Web refers to the internet and log means writing a detailed record of the day to day work.

Thus, Blog literally means an informally written record of the day to day activities.

Characteristics of a Blog

- Blog can be called as a personal website.
- Blog is a free of cost available facility.
- The information on the blog can be published in the form of words, pictures, video as well as links.
- The copyright of the information published on the blog is held by the individual himself.
- The information published on the blog is called as 'Post'.
- It is possible to edit or delete any post.
- It is possible to change the design, layout and title of the blog at anytime.
- There is a facility for the readers to make their comments on every post. All the rights to publish the comments made on the post lies with the owner of the Blog.
- The name and address of the Blog can be decided by the owner.

Limitations of a Blog

- Blogs do not appear in the search engines very easily.
- It is necessary to verify the reliability of the information given in the blog.
- Less facilities are available in a blog as compared to the websites.



See carefully

To understand the difference between a website and a blog one should carefully read the 'URL' alongwith the address.

eg. Website :- <http://www.mahasssboard.in/>

blog :- <http://punetrekss.blogspot.com>



Do This

Visit any five educational blogs and write their addresses.

- (1)
- (2)
- (3)
- (4)
- (5)

8.2.1.5 Wiki

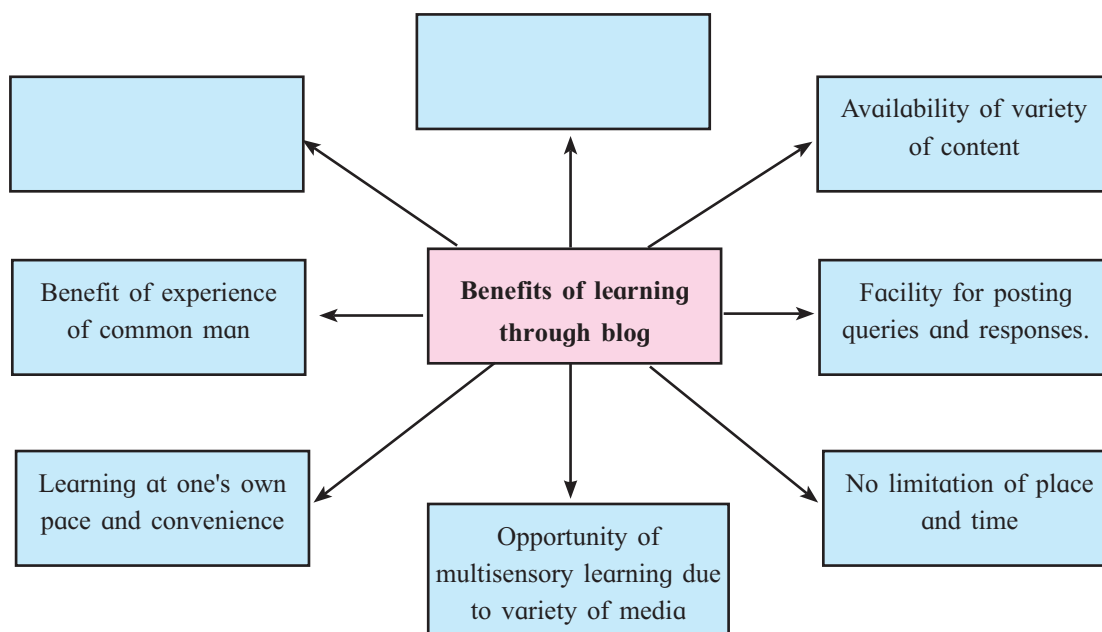


Do You Know?

Wikipedia is an example of publication tool of the website Wiki.



Complete the following Diagram



8.6 : Benefits of learning through Blog



Let's Tell

Which wiki websites have you visited for collecting different types of information?



Understanding the Concept

Wiki is a publication tool available on the internet. It has a facility for modifying the information published on the website. Wiki is called as a collaborative website because every reader can contribute to the information on the website in the form of text, pictures, figures, graphs, maps, etc. eg Wikipedia - In this form of wiki, readers all around the world have contributed to the knowledge related to various subjects/topics and thereby created a huge storage of knowledge.

Characteristics :

- Wiki is an online tool for creating collaborative knowledge.
- Any common reader can suggest modification or add to the knowledge on the Wiki.
- The right to modify or add to the published knowledge on the Wiki website remains with the owner of the website. The correction or suggestions are sent to the experts panel for their evaluation. The decision regarding correction in the published information is taken on the basis of the advice of the experts.



Complete the list

Advantages of learning through Wiki

- Benefit of the knowledge of the common man.
- Creation of a huge storage of knowledge.
- Availability of knowledge of various subjects.
- Opportunity for the reader to suggest corrections or additions.

- Creation of continuously updated knowledge.
-
-
-



Remember it

Limitations of Wiki

- Since different readers make additions to the knowledge on the wiki, the reliability decreases.
- Since continuous changes take place in the information, the validity of the knowledge decreases.
- Since there is a lot of published/available information it becomes difficult to select appropriate information from it.
- Since the access to the content is freely available on the wiki it is likely that the cyber criminals may take its undue advantage.
- The information on the wiki needs to be verified from different sources.

8.2.1.6 Video Conferencing



Discuss

- Share your experience of a video call with everyone.
- Have you used the facility of conference call in a smart phone? If yes, share it with the class.

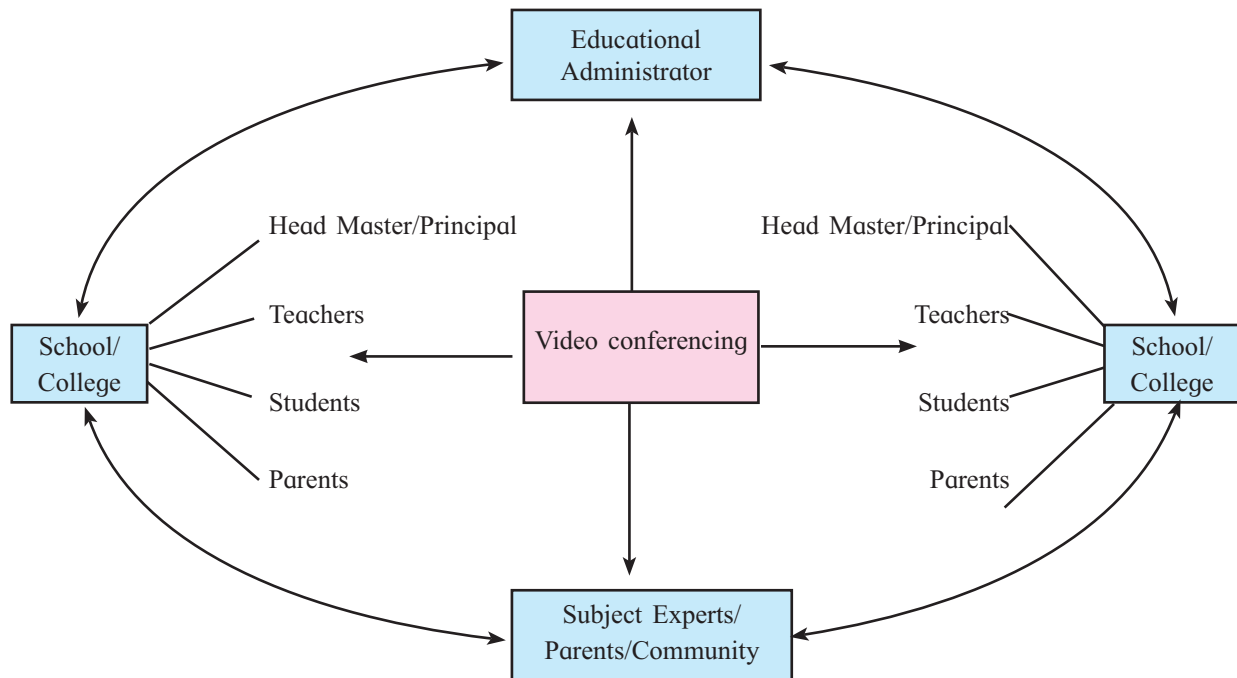


Let's Understand

Video conferencing refers to two or more individuals communicating with each other from different places through a video.

Use of Video Conferencing for Learning

- A teacher can teach students from different schools all over the world simultaneously.



8.7 : Video Conferencing

- Students from different schools can communicate with each other through video conferencing.
- Teachers and experts from different schools can exchange their knowledge with each other.
- It is useful to develop a dialogue between educational administration, community, parents and different educational institutions.
- Overcoming the geographical boundaries, dialogue is possible among teachers and students from different schools all over the world.
- The traditional classroom is transformed into a virtual classroom.



Do You Know?

Following infrastructure/physical and technological facilities are necessary for video conferencing.

- Separate room
- Broadband Internet Facility
- Screen
- Speakers
- Microphones
- Seating arrangement
- Computer

8.2.1.7 Social Media



Share it

Which from the following social media have you used?

- Facebook ☐
- Instagram ☐
- Whatsapp ☐
- Twitter ☐
- YouTube ☐
- ☐



Discuss

What are the uses of social media in our daily life?



Even this can Happen

- Quality learning can take place by becoming a member of various educational groups on social media.
- We can communicate with our teachers through social media and take their help in our learning.

- We can give educational and personal help to our family, relatives and friends through groups on social media.
- Important documents, educational updates and news, important information, links of educational websites, can be shared via social media.



Remember it

Social media is a medium which provides the facility of communicating with two or more people using text; pictures, symbols, video, audio etc. at one and the same time.



Share it

From the following for which reasons do you use social media?

- Educational ☐
- Family ☐
- Social ☐
- Individual ☐
- Communicating with friends ☐
- ☐

If you are not using social media state the reasons :-

- Financial condition ☐
- No permission from parents ☐
- Lack of internet facility ☐
- Do not feel the need for using ☐
- Other ☐

8.2.2 Offline Tools



Let's Tell

In absence of internet can computer be used for education?



Remember it

Those facilities available on the computers which can be used without the internet are called as off-line facilities.

8.2.2.1 Educational DVD

Have you used educational DVD before?
If yes, write their names.

-
-



You Should Know

- Educational DVD's are primarily based on various subjects in the curriculum. Also some are based on Value Education, Health Education, Moral Stories, Poems, Physical Education too.
- Educational DVD's can be seen using computer or DVD player.
- Entertaining multimedia is effectively used in these DVD's using text, pictures, animation, sound, symbols, videos, etc.

8.2.2.1 Educational Computer Games



Let's Recall

Which is your favourite video game?

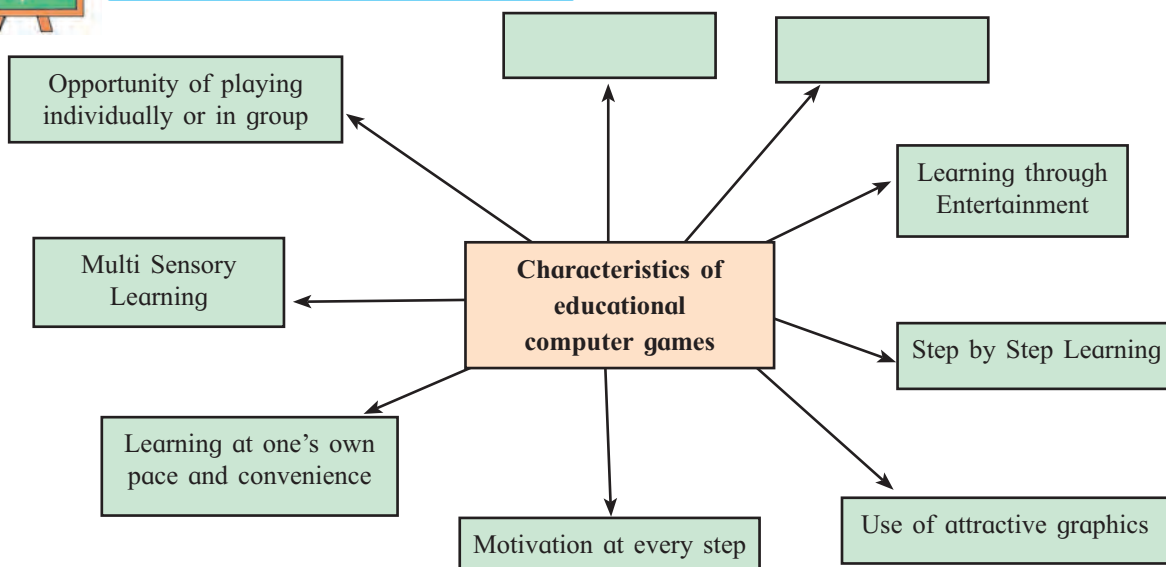


Remember it

Games developed on a specific subject with specific educational objective are called as educational computer games. These games can be played on the computer. Educational computer games help in developing skills/competencies like decision making, discrimination, logical thinking, concentration, etc.



Complete the following Diagram



8.8 : Characteristics of Educational Computer Games

8.3 e-content Development :

Concept and Steps



Think

Which from the following things have you done?

- Reading e-books ☐
- Watching video ☐
- Use of interactive software ☐
- Use of educational DVD ☐

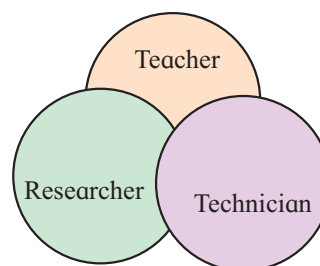


Remember it

- Data available in various digital tools is in electronic form. This is called as e-content.
- e-content can be in the form of text, pictures, diagrams, charts, animation, sound, video, etc. e-content is made available to the students through various digital tools.

8.3.1 Concept

A teacher develops e-content with the help of researchers and technicians. A teacher through research establishes the validity and reliability of the e-content. The help of the technician is taken to present the e-content in the form of multimedia.

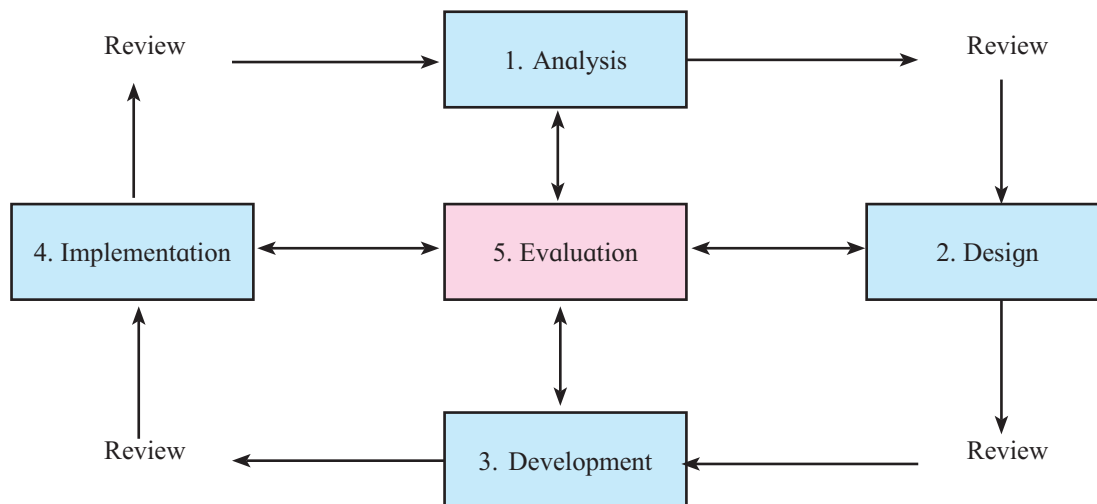


8.9 : e-content Developers

8.3.2 Steps

There are many models of e-content development out of which the 'ADDIE' model developed by Florida State University, USA is the widely known model of e-content development. The term 'ADDIE' is derived from the first letter of each of the words that describe the steps of the model namely :- **A**nalysis, **D**esign, **D**evelopment, **I**mplementation and **E**valuation.

(I) Analysis : It is the first step in e-content development. The content which is to be converted into e-content form is analyzed considering various criteria - Unit, Subunit, Concepts, Rules, Principles, Cause-effect relationship and are correlated with the objectives and evaluation. The multimedia which may be required are also taken into consideration.



8.10 : Steps of e-content Development

(II) Design : The maxims of teaching are considered while presenting and arranging the content. eg. From easy to complex, from part to whole, from known to unknown, etc. A balance and synchronization between the arrangement of units and technology is maintained and the content is designed. By taking the help of computer experts and researchers the design of the e-content is made perfect.

(III) Development : Using software the e-content is developed as per the design. Teachers and computer experts together transform the content in the form of e-content and its reliability and validity is examined.

(IV) Implementation : After the e-content is developed it is actually implemented on the students. Students are given orientation regarding handling/using the e-content. The necessary hardware and software is also made available.

(V) Evaluation : In this step how much learning of the student has taken place after using the e-content is assessed. Both formative and summative evaluation is done. In this step the effectiveness of the developed e-content is

determined.

8.4 Cyber Security :

Concepts, Threats and Remedies

8.4.1 Concept :

Computer and internet together make the cyber world. People using the internet are the citizens of the cyber world. There are many cyber criminals in this world. They commit various crimes by misusing technology. Awareness regarding control and solutions for getting security from these criminals is called as cyber security.



Recall it

From the following which news have you read/heard?

- ☐ Tricked/deceived via email by offering attractive prizes.
- ☐ Tricked/cheated via fake account on social media.
- ☐ Loss of crores of rupees due to hacking of the bank server.
- ☐ Data of thousands of accounts on social media stolen.
- ☐ Cheated for thousands of rupees by use of fake credit/debit card.



Remember it

- The number of users of the internet is increasing tremendously.

- The number of on-line transactions is also increasing significantly.
- The percentage of on-line shopping is increasing day by day.
- Digitalization in all areas of life is being initiated.

Have you tried this?

- ☐ On-line shopping
- ☐ On-line payment
- ☐ On-line billing
- ☐ e-banking

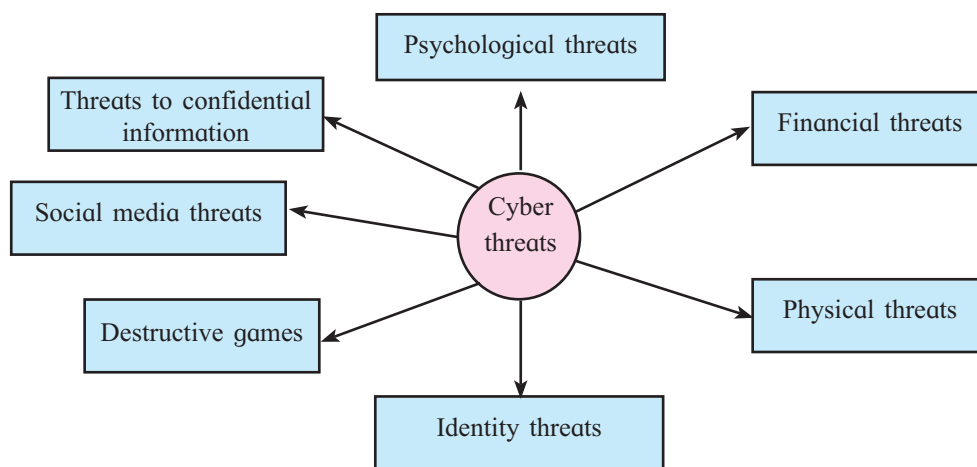
8.4.2 Threats and Remedies

(I) Financial threats

There is a possibility of being cheated at various stages of on-line transactions. Cyber criminals use various ways like hacking passwords, making fake debit/credit cards, misusing information about bank accounts by stealing mobiles, making fake accounts and getting information about bank accounts through fake calls or SMS and stealing money etc.

Safety from financial threats

- Do not share and information of bank accounts through phone, SMS or email.
- Do not save user name and password. Remember them.
- Verify reliability of mobile app or website before making any on-line payment.
- Change the password regularly.
- Do not make any transaction with unknown person on social media.
- Avoid making on-line transactions through public network, cyber cafe, free wi-fi.



8.11 Cyber threats



Discuss

- Have you experienced mental harassment on social media?
- How many friends do you have in real life and on social media?

(II) Psychological threats

- Spending too much time on the internet may cause psychological threats.
- Cyber bullying means mental harassment on social media by individuals or groups following a specific ideology through the use of abusive words. Sometimes threats are given to life also.

It may result in tremendous mental stress.

- Due to continuous use of internet, people get addicted to the cyber world. They start moving away from the real world; and remain isolated or alone. There is a loss in confidence in dealing in social situations.
- An individual wants to get everything on a click in the real world, as it is happens in the cyber world. Consequently patience and tolerance starts decreasing and the individual may go into depression.

Safety from psychological threats

- Use the internet for limited time.
- Do not avoid mixing with people in real life.
- Have interactions with family and friends.
- Do not react/respond to any controversial content on social media.
- Do not 'like' or 'forward' hate creating posts.
- Do not 'like' or 'forward' any posts regarding discrimination of caste, religion, politics, region etc.

(III) Physical threats

If a lot of time is spent in the cyber world, physical movements get restricted which may lead to health problems. Since

many things can be done online now, actual/face to face interactions and transactions are becoming less and less.



Complete the List

Physical threats

- Muscles become weak since physical movements are decreasing.
- Obesity increases.
- Psychomotor skills do not get developed properly. Sports are neglected.

•

•

Safety from Physical threats

- Use internet only for a specified time.
- Play outdoor games.
- Do face to face/actual/offline transactions wherever possible.

(IV) Threats to Identity

Creating a fake account in the cyber world using someone else's photograph and name is called as 'stealing identity'.

We upload our many photographs online, which are available to everyone. Such photographs are downloaded by cyber criminals to create fake profiles and commit crimes.



Contemplate

Till now you have shared which photographs on the internet and with whom?

Safety from threats to Identity

- Avoid giving unnecessary personal details on the net. Give only limited information. Do not give details regarding birth place, birthdate, address, education etc.

- Do not upload individual photographs on the net. Group photographs can be shared.
- Make appropriate setting on social media sites so that our information/photographs are visible only to our friends.

(V) Threats to the confidentiality of Data



Discuss

Read the details of permissions of mobile apps carefully and discuss.

Keeping the moving information in the cyber world confidential is one of the challenges to the technicians. Day by day it is becoming more and more difficult to maintain privacy of information of individual customers on the different website databases. Cyber criminals make cyber attacks on the websites of different banks, institutions and steal individual information and use it for committing various cyber crimes.

Mobile apps too gather individual/personal information on the mobile through different permissions, due to which there is a threat to individual confidentiality.

Safety of confidentiality of data

- Keep minimum number of apps on your mobile. Delete unnecessary apps. If they cannot be deleted either 'disable' them or 'forcefully stop' them.
- Verify the reliability of websites before providing individual / personal information.
- Keep 'username' and 'password' confidential.
- Do not make friends with strangers on social media.



Let's Tell

Which online games have you played where you were a part of a team?

(VI) Threats of Destructive Games



Contemplate

There are many entertaining games in the cyber world. Various tactics are used so as to encourage maximum number of people participate in them. There are many games which take undue advantage of depression among people. There are also destructive games which include fights, attacks, include firing, bombing, killing animals and birds, harming oneself, etc. There is a possibility of developing a 'criminal mindset' by playing such games.

Safety from Destructive Games

- Focus on playing actual games in real life.
- Have a dialogue with family and friends who can be of actual help to you if you are suffering from depression.
- Play constructive games which require brain storming.
- Read biographies of famous personalities and try to find out how they successfully resolved the problems faced by them.



Share it

If you have suffered harassment on social media, share it.

(VII) Threats from social media threats

- Social media has become a need today's life. The members of facebook are over 300 crores. From this, one can understand how much social media has become popular. Instagram, Youtube, Whatsapp, Snapchat, Tic Toc, etc. social media are used widely even in India.

There are following threats of Social Media.

- An individual can be harassed collectively using social media. This is termed as 'trolling'. An individual may be targeted

by a group if he/she has commented on any socially, politically or religiously relevant aspect, which is opposed to by the group. The person is trolled by use of abusive words, insulting comments, etc.

- Keeping a track on every act of an individual on social media is called as 'Cyber Stalking'. The information regarding the individual is continuously tracked and is used for committing crimes. eg. If an individual shares his 'live location' on the social media, and if it is realised that he is not at home, there is a possibility of theft being committed at his/her residence.
- Too much use of social media may make the person addicted to it. Unless and until they open their accounts and chat with people on social media, they become restless. There is a possibility of them becoming mental patients suffering from mental illnesses. eg. FOMO (Fear of Missing Out). In this illness the individual constantly fears of remaining ignorant of important events, comments, posts, etc. To remove this fear, the person stays on-line continuously.
- If one makes friends with strangers on the social media, it is quite likely that various crimes like stealing information, downloading of photographs, creating fake account, blackmailing etc. may be

committed.

- More time is spent on social media, and less time is available for day to day functions. Hence time available for art, sports, entertainment, study, exercise, family, friends etc. becomes less and less.



Discuss

- Go to the 'Help Center Menu' available on social Media and read the information regarding the Do's and Don'ts. Discuss in the class.

Safety from social media threats

- Use your words carefully if you are commenting on any controversial topic on social media.
- 'Like' or 'Share' only those posts about which you are confident and you agree with.
- Communicate to your parents if you are being 'trolled' or 'stalked' on social media.
- Take care that you do not get addicted to social media. Use social media only for a specific time, by keeping a control on yourself.
- Take care that your interactions with your family and society do not get reduced due to excessive use of social media.

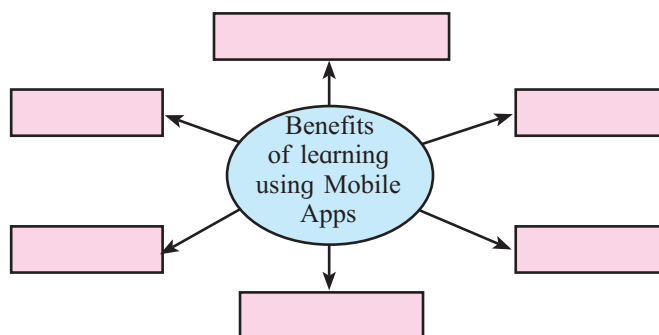


Q.1 Select the appropriate alternative and fill in the gaps :-

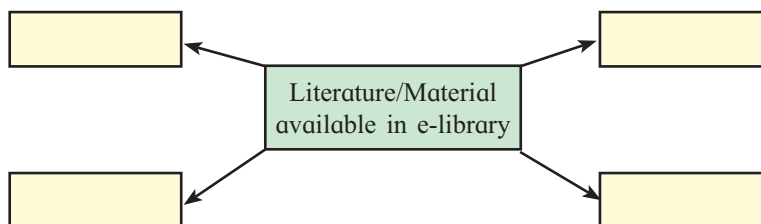
- (1) e-learning means
 - (a) learning through mobile
 - (b) learning through website
 - (c) learning by reading blogs
 - (d) All of these
- (2) The first website in the world was published in the year
 - (a) 1999
 - (b) 1995
 - (c) 1991
 - (d) 2001
- (3) From which of the following forms is the literature (material) not available in e-library?
 - (a) e-book
 - (b) documentary
 - (c) video lectures
 - (d) printed books
- (4) From which two words has the word 'Blog' been derived?
 - (a) web + blog
 - (b) web + login
 - (c) website + blog
 - (d) web + log
- (5) From the following which is not a social media?
 - (a) Facebook
 - (b) Android
 - (c) Instagram
 - (d) Whatsapp

Q.2 Complete the following figure

(1)



(2)

**Q.3 Answer the following in brief.**

- (1) Explain the characteristics of e-learning.
- (2) Limitations of learning using mobile apps.
- (3) Explain the concept of e-library.
- (4) Explain the characteristics of blog.
- (5) Explain the concept of Wiki.
- (6) Which are the technical facilities required for video conferencing?
- (7) Explain the characteristics of educational computer games.
- (8) Explain in brief the steps of e-content development.
- (9) Explain cyber threats in brief.

Q.4 Answer in detail :-

- (1) Write a note on any educational mobile app using the following points :-
 - (a) Name and creator of the App.
 - (b) Technical information about the App.
 - (c) Facilities available in the App.
 - (d) Educational implications of the App.
- (2) Visit an 'e-library' website on-line and write its facilities.
- (3) Visit an educational blog on-line and write its educational implications.
- (4) Prepare a list of questions which you would ask to students in the USA via video conference.

Activity :-

(1) Prepare posts on whatsapp on the following topics :-

- (i) Safety measures to be taken while doing financial transactions on-line.
- (ii) Psychological threats arising out of excessive use of social media.
- (iii) Threats arising out of playing destructive games on computer.

(2) Discuss with the parents of one of you friends on the following topic and write its report.

- (i) Mobile - need or addiction.
- (ii) Social media - Educational uses.
- (iii) Cyber security

(3) Prepare a poster using a Mobile App on the theme - 'Precautions to be taken while using Social Media'.

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