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RESEARCH ARTICLE

DIGITALIZATION IN THE 21st CENTURY.

Dr. Pramod Mishra¹ and Ms. Shiwali Singh²

1. Assistant Professor, Centre for Teacher Education (CTE) DEPT, Institute of Professional Excellence & Management (IPEM), Ghaziabad (UP).
2. B.Ed Ist Yr Student, Centre for Teacher Education (CTE) DEPT, Institute of Professional Excellence & Management (IPEM), Ghaziabad (UP).

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Abstract

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Introduction:-

With the advancement in science and technology in the last decade people of the world are now connected through technology. Literacy means being able to read and write. Digital literacy involves digital reading and writing techniques in various multimedia forms. It can include words, texts, visual displays, motion pictures, graphics, audio and video. Digital literacy shares refers to the reading and writing of digital texts, for example being able to 'read' a website by navigating through hyperlinks and 'writing' by uploading digital photos to a social networking site. Digital Literacy refers to the interest, attitude and ability of individuals to appropriately use digital technology and communication tools to access, manage, integrate, analyze and evaluate information, construct new knowledge, create and communicate with other. It is the ability to respond positively to change and involves a working knowledge of current tools and an understanding of how they can be used. It also refers to the knowledge, skills, and behaviors used in a broad range of digital devices such as smartphones, tablets, laptops and desktop PCs. The JISC Developing digital literacy guide has mentioned about seven types of digital literacy: media literacy, information literacy, digital scholarship, learning skills, communication and collaboration, career and identity management and ICT literacy. In a remarkably short span of time, the world and its people and cultures are largely driven by the Internet, smart phones, computers. Some components which are related to digital literacy include computer literacy, network literacy, media literacy, network literacy, scientific literacy. Digital literacy is a set of competencies that are required for full participation in a knowledge society. Examples of Digital Literacy include understanding how to use web browsers, search engines, email, text, wiki, blogs, Photoshop, Powerpoint, use of digital devices such as smartphones, tablets, laptops etc. to showcase learning. The paper focuses on the digitalization in the 21st century.

21st Century Skills for Digital Literacy

Spires and Barlett (2012) divided digital literacy into 3 categories

1. locating and consuming digital content,
2. creating digital content, and
3. communicating digital content

21st Century skills are the abilities that today's students need to succeed in their careers during the Information Age. These skills are:

Critical thinking :

Finding solutions to problems

Corresponding Author:-Dr. Pramod Mishra.

Address:-Assistant Professor, Centre for Teacher Education (CTE) DEPT, Institute of Professional Excellence & Management (IPEM), Ghaziabad (UP).

Creativity :

Out of the box thinking

Collaboration :

Working with others

Communication :

Talking to others.

Information literacy :

Understanding facts, statistics and data. Ability to find and select information

Media literacy :

Understanding methods in which information is published

Technology literacy :

Understanding machines that make information age possible

Flexibility :

Deviating from plans as needed

Leadership :

Motivating a team to accomplish a goal

Initiative :

Starting projects and strategies

Productivity :

Maintaining efficiency in an age of distraction

Social skills :

Meeting and networking with others for mutual benefit

Social and cultural understanding

E-safety

Character :

Traits such as grit, perseverance, and resilience; alongside a desire to make learning an integral part of living

Citizenship :

The ability to consider issues and solve complex problems based on a deep understanding of diverse values and a worldview.

Digital literacy can be of immense value but it can make children vulnerable to criminals and bullies and may cause students to compare their lives with the fabricated online lives of others; leading to feelings of inadequacy, detachment, isolation. It can also leave pupils open to misinformation, manipulation, and fake news.

Digital literacy is the combination of digital tool knowledge, critical thinking and social engagement. Mathematically it can be written as:

Digital Literacy = Knowledge of Digital Tools + Critical Thinking + Social Engagement.

World Wide Web

The web is a way of exchanging information between computers on the internet. Information is in the form of pages of text, pictures, sound arranged logically which can be viewed using a browser software. A web browser is a software programme used to view and interact with various resources on the web. eg Internet explorer.

Structural Components of World Wide Web

The structural components of World Wide Web are :

1. Clients/browsers
2. Servers
3. Caches
4. Internet

Semantic Components of World Wide Web

Semantic components of World Wide Web are :

1. HTTP (Hyper Text Transfer Language)
2. HTML (Hyper Text Markup Language)
3. XML (Extensible Markup Language)
4. URIs (Uniform Resource Identifiers)

Fundamental Concepts of World Wide Web

Hypertext is a text that contains links to other texts.

Hypermedia is a term used for hypertext which is not constrained to be a text and includes sound, graph and video.

Web Browser

It displays a web document and enables the user to access web documents.

Web Server

It waits for the browser to request a web page and looks for the requested information, retrieves it and sends it to the browser and sends an error message if the file is not found.

It involves the ability to locate and consume, create, and communicate digital content, while simultaneously employing a process of critical evaluation.

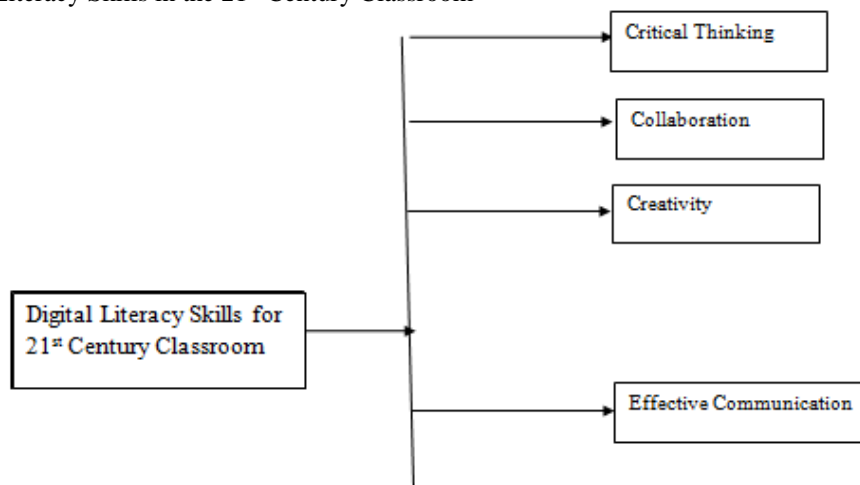
Digital Devices Used for Digital Technology

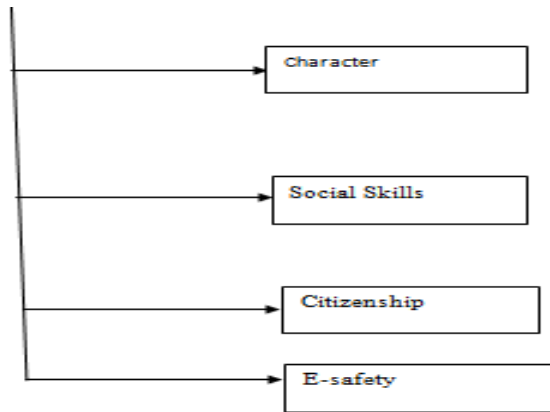
Digital devices used these days are :

1. iPads, Desktops
2. Digital Class Calendar
3. A class Internet start page -- to curate websites, widgets, and other digital tools used for learning.
4. A website or blog can be used to share class activities with parents and other stakeholders.
5. Student digital portfolios -- to curate and collect student work for viewing and sharing.
6. E-mail is a method of communicating quickly with students outside class time.
7. More than 1 billion people now use facebook and twitter.

Fig 1 shows the digital literacy skills in the 21st century classroom.

Fig 1:-Digital Literacy Skills in the 21st Century Classroom



**Conclusion:-**

Digital literacy is a buzzword for 21st century classrooms. It is the ability to use digital technology and communication tools to locate, evaluate, use and create information. Digital Literacy can play a vital role in child's ability to succeed both in school and also in their lives. It is an important aspect of educational pedagogy for the 21st century. It will enhance and enrich classroom learning with active learning activities and bolster student's confidence in using technology. Through the use of technology children will focus more in understanding of concepts because they are fascinated by technology. It will provide them an opportunity to sharpen their learning skills like following instructions, making plans and stay focused. It will also provide good learning experiences to students and they will embrace and benefit from these experiences for the rest of their lives. A person who possesses these skills of using digital devices like computer software, hardware, internet and mobile phone (smart phone) to interact with society can be called a digital citizen.

Today's generation has been surrounded by computers, cell phones, video game and the Internet. For teachers, there is a great urgency to look beyond traditional forms of print media so that they can prepare students for careers that require active participation in the new digital age. Therefore ICTs are the learning and teaching tool of the 21st century. A variety of methods can be used by teachers for incorporating digital literacy into the classroom. It is very interactive and can be used for engaging students and provide them with knowledge for future endeavours in a highly interactive technology.

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