INFORMATION & COMMUNICATION TECHNOLOGY IN EDUCATION

(An Edited book for UG & PG
Students of Education)

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XII

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Chapter-14

Use and Importance of 'Web 2.0 Tools' for E-Learning and Connecting to the World

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Abstract: The importance of web version 2.0, its uniqueness, as well as tools such as Wikis, Blogs, Social Networking, WhatsApp, Email, Facebook, Streaming Media, and Instant Massaging are described in this chapter. These technology and tools are extremely beneficial to library and information services. This chapter has been written to look into the uses of Web 2.0 in libraries and information services, as well as to recommend the finest apps that may be used to help provide these services. The purpose is to figure out what Web 2.0 is, what it may be used for, and how libraries can deliver better services to their customers. At the same time, the use of Web 2.0 tools among students is expanding. So, this chapter explained the use and importance of 2.0 and its various tools in recent time scenarios.

Keywords: Internet, 2.0, Wikis, Email, Social Networking, Social Media & Blogs.

Introduction

Technology has paved the way for greater use of the Internet, enabling access to a wide range of information and resources. With the advancement of technology, a slew of new tools has been developed to aid human communication

and interaction. People all over the world, now have the facilities of the Internet at their fingertips and they can communicate easily with the help of Web 2.0 technologies in every field. Web 2.0 is gaining traction in educational settings, even though more research is needed to determine its full potential.

WEB 2.0

When we compare Web 2.0 to Web 1.0 we get the present state of the internet, in which we have a vast amount of client data/information and enhanced efficiency for end-users. Generally, Web 2.0 applies to 21 century Web apps that have brought a huge amount of changes in the online world after the dot-com bubble broke.

Meaning of Web 2.0

Web 2.0 has nothing to do with any particular advancement in internet technology. It refers to a shift in how individuals in the 21st century use the internet. In the modern era, there seems to be a higher level of information exchange and connectivity among individuals. Instead of merely viewing and absorbing facts, this new edition enables customers to actively participate in the experience.

Difference between Web 2.0 and Web 1.0

The phrase "Web 1.0" is often defined as the early phases of the Internet. At the time, there were only a few content suppliers, and the majority of Web users were consumers. Static HTML was less common than dynamic HTML, which contains interactive, animated, and dynamic webpages created using a specific code or language. This stage's

material comes from a server's file system rather than a DBMS. Here DBMS means database management system. Clients may fill out virtual guest books and get HTML forms through email.

Web 1.0 sites include personal webpages, Britannica Online, and mp3.com. The majority of these websites are not dynamic (static), with little functionality and adaptability.

As the Internet began to evolve toward a system that actively engaged the user, the term "Web 2.0" was created in 1999. Consumers were motivated to give information instead of just consuming it. People could now present comments and articles, and user accounts could be made on a variety of websites, resulting in increased participation. Web apps, self-publishing platforms like Wikipedia, and social media sites have all sprung up as a result of Web 2.0.

Web 2.0 services such as Wikipedia, Facebook, Twitter, and various blogs have transformed the way knowledge is disseminated and delivered.

In general, social media enables people to connect and engage with each other by speaking their minds, viewpoints, and opinions. Users can use labels, shares, tweets, and likes.

Advantages and Disadvantages of Web 2.0

Thanks to technology improvements, users may now communicate their thoughts and opinions with others, resulting in new methods of organising and interacting with each other, as well as improved cooperation.

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However, acting more like an online open forum has a lot of disadvantages. As social media has evolved, we've seen an increase in online stalking, cyberbullying, identity theft, and other online crimes. There's also the possibility that people will spread misleading information via open-source information exchange platforms like social media.

Web 2.0, like Web 1.0, is a stage in the evolution of the Internet. Web 3.0 is predicted to be named the Semantic Web since it will be changed to be more natural to each user's demands.

Key of Web 2.0 Services

Web 2.0 offers a wide range of services in areas including social media, communication, and information exchange, including photo, document, and video streaming, among others. Some of the most important Web 2.0 services are as follows:

➢ Audio blogging and podcasting
➢ Newer Web 2.0 services and applications
➢ Blogs
➢ Tagging and social bookmarking
➢ Wikis
➢ Multimedia sharing

The following sections will teach you about wikis and blogs. Tagging is the process of describing a digital object (such as a picture, short video, or site) by attaching a label to it. Users who use social bookmarking can share similar traits and produce a list of favourites or bookmarks on a central database, which can subsequently be distributed to other customers.

Blogs

A blog is a personal website with content organized in a journal or diary fashion. Every blog has a date on it, and the most current blog is presented at the top of the web page in reverse chronological order. Readers sync up on every blog by beginning from the top and scrolling downwards till they find stuff they've read previously.

Although most individuals consider blogs as personalized journals, they can be about anything. People use blogs to describe their employment, pastimes, pet, socio-political concerns, and media and current affairs. While the majority of blogs are created by a single individual, 'group blogs,' which combine the efforts of several people, are also popular.

While the original blogs were authored manually, the appeal of writing a blog grew along with the development of writing tools for the blogs. The first of them was Live Journal (www.livejournal.com) and Userland. Many bloggers currently use Word Press (www.wordpress.org) (www.wordpress.com) or Blogger (www.blogger.com). Users can establish better blogs and blog articles by filling out simple web forms; no programming or formatting skills are required. As a response, blog aggregating services have claimed that there have been huge numbers of blogs published.

The 'blogosphere' is a collection of blogs that are linked to one another. The most frequent way for people to connect is through blogs that link to each other. Authors of blogs may also provide a 'blog roll,' which is a list of blogs they often

read. Special readers, known as 'RSS readers,' collect blog summaries created by blog software and may be used to view blogs. RSS readers are used to 'subscribing' to a blog.

Although blogging was the dominant form of personal publication, it now serves a modest role in a much bigger picture. Many bloggers have moved to social networking sites such as Facebook. Others make use of Twitter and other "micro-blogging" platforms. Audio blogs (also known as 'podcasts') and video blogs (commonly known as 'vlogs') have evolved from text-based services.

In the field of education, Blogging holds immense popularity, as there are 4 lakh educational blogs published by edublogs (www.edublogs.org). These blogs have proved very helpful for teachers as they have been using them since 2005. (Downes, 2004). Years of practice have led to a common understanding of the benefits of blogging in education. Blogs can aid in the formation of a learning community because they are interconnected. Authors can exchange ideas and feedback, as well as provide support in the form of reviews and answers to questions.

Additionally, blogging gives learners a meaningful voice and ownership of their own learning, enabling them to identify their own requirements and influence their own learning.

Blogging also gives students authentic and ultimate global audiences for their efforts. By providing comments, a large audience can help students be more motivated to do their best work. Students can also use one other as a platform, able to take on leadership roles at different stages of their study.

Additionally, blogging encourages students to perceive their work across disciplines as connected and organise their own classes as well as other learnings. With the support of the professor and information from blogs published by the people who are working in the industry, learners can undertake a collection of the investigation into a specific subject matter or topic, culminating in their very own understanding of the material.

Regularly blogging improves communication and investigating skills. It also encourages computer skills by teaching kids how to evaluate and critically evaluate a range of online materials.

Importance of Blogging in E-Learning

➤ Start with the fundamentals. The bulk of classroom blogs start with the teacher publishing class materials like reading lists and due dates (Downes, 2004). This increases the instructor's acquaintance with technologies and the learners' habit of examining the resources which are available online frequently.

➤ Set a positive example for others. Instructors should set an example by creating their own blogs and offering links to pertinent materials, as well as commenting on class subjects, before mandating students to blog. This technique will not only give students more information but also builds a trend and sets standards when they start their own blogging.

➤ Read. Students should start browsing other folk's blogs before starting their own. This project should be used by teachers to show how other learners on the platform utilise blogs to facilitate the learning

203

process and to improve analytical reasoning and reading skills. Educating individuals on how they should react to blog articles is just as crucial as teaching them how and where to write them.

➤ Make a plan. When confronted with an empty piece of paper, a person who blogs will be stumped unless assigned a particular thing to write about. Students should create a blog post about a current topic, a bit of prose, or a problem that comes up during the semester.

➤ Encourage others to engage in conversation. It is not advisable to blog alone. Bloggers should leave comments on each other's work. Encourage students to connect to each other's blogs using an RSS reader, which also will make reading and posting much easier. Instructors must also contribute to students' blogs and offer comments, setting a good example.

➤ Ownership must be honoured. A pupil's blog acquires significance since it is a reflection of his or her own effort. However, for a blog to hold this value, a participant's ownership of it must be authentic. While accepted bounds or rules of practice must be followed, pupil bloggers should be free to express themselves.

➤ Address problems right away. Other students are the greatest major threat to pupils online. Harassment (or ragging) is a particularly serious issue. It is critical to recognise cyberbullying as soon as it occurs and take measures to avoid future incidences. Educators should educate themselves because bullying can be difficult to detect and treat.

Wikis

A wiki is a site that anyone with a wiki system account may edit. Wiki is a fantastic platform for online interaction as well as an information repository. Wiki pages have become a useful platform for collaborative writing because anybody may add, delete, or update content. The word wiki comes from the Hawaiian language, which is called wiki and its meaning is quick or fast. A wiki, in simple terms, is a group of simplified websites that preserve all previous edits of a page. You can now go back to any previous page. A wiki system includes several tools for tracking changes to wiki pages, uploading photographs, music, or video, and creating links (URLs) to internally or externally websites (external links). WikiWikiWeb, which was the first software that contains Wiki, was established by Ward Cunningham in 1994. It was described by him as *"The simplest online database that could possibly operate."*

Limitations and Strengths of Wiki

Wikis empower students to actively participate in knowledge generation, communication, and cooperation as strong cognitive tools, as per Zhang and DeLoose (2009). A wiki can be used by multiple courses and groups of people who want to learn, with the content being modified and added on a routine basis. Students, instructors, classes, organizations, schools, and specialists from all over the world can collaborate using wiki-based learning activities. Wiki apps help in education and learning by giving shared information storage that is regularly renovated and

improved. Students can not only access information and resources on existing wikis, but they can also create new wiki pages or contribute to the ongoing ones, providing them with much more control over the teaching process. Participants in a wiki project, such as creating a wiki book, have the chance to trade information through putting into action, relevant, and cooperative study and learning. After moving from passive data receivers to knowledge providers, learners are highly driven to work and communicate consistently in wiki-related learning activities. The wiki-based learning process may also suit the needs of millennial learners, as well as other types of learners.

Strengths of Wiki

> Anyone can use it because it is free and accessible to the public (Internet connection required).
> Everyone can draft a wiki on a topic that interests them and invite others to contribute to their work.
> Because others may add to your writing, peer review is encouraged, and the quality of the content may increase.
> Any user can make changes to the wiki pages (But he/she should be registered).
> The history or past of all the work you've produced is kept, and you may go back to any of them at any time.
> The 'Watch' option allows you to be notified whenever the content which is present on that page changes.
> It serves as a platform for collaboration and also for creating and sharing material, allowing several

206

individuals to work on the same document from diverse perspectives.

> Online quizzes and evaluation activities can be included in your course modules.
> YouTube videos, Slide share presentations, Google Calendar, Mind Map, and other software tools and apps may be readily incorporated into wiki pages.
> The abilities required for wiki editing are simple to acquire and apply.
> It is immediate in nature since it is published on the web as soon as you save and change a page.
> Because of the presence of a large selection of software that is open source that may be installed for wiki related to the institution, licensing expenses can be avoided.

Limitations of Wiki

• On a wiki platform, there may be incomplete information or pages.

• Because anybody may modify the sites, there's a potential that inaccurate information will be added. (However, since others may read it and fix it, this issue can be addressed.) If necessary, editing can also be disabled at the system level.

• Because there are concerns regarding the legitimacy and dependability of the content, educational institutions have yet to recognise it as a full-scale form of instruction delivery.

• Because wikis have no formal structure, information might get disorganised if page design is not done correctly.

Social Networking

The word "social networking" has only been commonly used since 2003. Many people have defined the term, but it is generally accepted to relate to online networks that enable users to interact, engage in conversation, and trade ideas, assets, and hobbies. With tens of millions of members, social networking sites such as Facebook and LinkedIn have grown in popularity. Social networking has primarily been utilised for informal learning and enjoyment until recently, but its usage in formal schooling is gaining popularity, both offline and online. If distance education is targeted, social networking can be described as "online networks that encourage and promote learning through face-to-face and online interactions while maintaining personal control over time, place, presence, activity, and identity". Comprehending the strength and disrupting cheapness of social networking requires understanding what Dalsgaard (2008) speaks to as transparencies - making the ventures, thoughts, communications, objects, and desires of others public and retrievable.

Several network learning apps are available. A few are inter-application systems with social networking elements including weblog, wikis, accounts, resource labeling, document sharing, and others. Specialized social networking programmes, on the other hand, concentrate on specific uses including learning of language, meeting others who reside nearby or have similar interests, hobbies, or ambitions, planning, and a range of other applications.

Social networking provides three broad purposes in e-learning systems:

➤ Socializing:

Various types of distance learning and its internet learning variants are responsible for placing a premium on content delivery to learners, with no or little communication between teachers and students and, in other circumstances, lack of opportunity for interaction between students. An absence of social interaction, looking for assistance and offers, and overall social contact and support options have been connected to an absence of social integration and bigger stages of attrition both in internet learning and remote education. Due to restrictions prohibiting schools from disclosing confidential information of students to other students, the issue of schools disclosing contact information to other pupils is particularly relevant in modern ELearning. As a consequence, students attending the same class and residing in the same apartment complex may find themselves unable to communicate with each other for mutual support, "study buddy" or research group discussion, collaborative learning work, or the development of social networks and social equity with other students. Learners may first find each other by looking at other learners' profiles on social media sites. Learners can use profile systems to communicate their interests, ambitions, regions, pastimes, prior course completions, photos, and other personal information. Hot links are typically provided through systems, allowing students to instantly connect with persons who support their interests or attributes. It is critical, though, that those students have discretion over how their personal information is shared. Many social networking applications necessitate global Internet dissemination, however other data can be quickly shared with a smaller set of people, like

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students enrolled at an institution, some in a single class, course, or club, or even specified 'friends' of that student. There is no single best authorization choice; instead, students must be free to pick the breadth of the sharing of personal material and information they generate, as well as make changes as needed.

➢ **Sharing:**

The most common formally and informally studying uses of network software is the capacity to collect, analyse, and annotate network resources. People want to be able to quickly access, annotate, and share their favourite websites, photographs, songs, vacation ideas, references, books, and a range of other electronic resources. If these resources are maintained in accessible networked locations and labelled or recognized by the user, they can be combined with other people's wealth to form aggregated collections. Users can examine what other people have found in these collections, evaluate and remark on these resources, and add value to the library as a whole. It is not required to limit the contents available for sharing to those created by others. Student-created educational materials (gateways, Wikipedia submissions, original songs, multi-media artwork, projects, and essays) can all be shared. These collections aren't limited to specific programs, batches, or even institutions. Instead, they might be used to create evergreen, permanent products that can be used and modified by a wide range of learners and instructors.

➢ **Sojourning:**

Sojourning is the term for traveling or working with others. There is abundant proof that cooperative and collaborative learning improves learning effectiveness, ambition,

perseverance, and interpersonal and communication skills at all levels of formal education. However, until the introduction of networking software, providing collaborative learning opportunities for distance learning learners was always difficult, constrained, and often costly (Paulsen, 2008). Students can utilise social software to plan their tasks, connect online via chat, voice, multimedia, or immersive technologies, and engage in a range of thinking, concept mapping, league matches, scenarios, product development, and other administrative, organisational, and learning activities.

Importance of Social Media

The use of social media is an exploration and learning process for all involved. Several techniques and approaches are emerging, making it difficult to predict what will follow when they are implemented. However, the advantages stated above indicate that social media pattern recognition will be more efficient, effective, and inspiring than conventional campus-based and distant learning. As a result, teachers should test educational apps in their classrooms so that they and their students can research and analyse the effects of WhatsApp, Facebook and other social media technologies on their blended learning. Most social media technologies are open source, which means they can be utilised for free or very little in testimony applications or with advertising support. Educators should be aware of the broad desire among busy and often instrumental students to be awarded credits for completion of their courses which can be used and getting the knowledge of utilising these tools, necessitating the development of enticing but voluntary and

211

scored exercises to complement e-learning and offline courses. Finally, educators would design ways for students to help one other learn and get the better of rational, financial, institutional, and getting to learn barriers. It's impossible to predict that these new technologies will receive the same level of institutional support as past educational and administrative technologies. We can, however, direct and promote the usage of social media to motivate students to help one another, resulting in essentially self-sustaining and expense-effective learning environments.

WhatsApp

WhatsApp is a free android and ios messaging app that may be downloaded. WhatsApp uses the internet to communicate messages, photographs, audio, and video. The service is comparable to text messaging, but it is far less costly than texting since WhatsApp distributes messages via the internet. WhatsApp can also be used on your computer by going to the WhatsApp website. You can download the Mac or Windows version of WhatsApp on your system. It is particularly popular among teenagers because of features such as group chat, audio messaging, and location sharing.

Features of WhatsApp

WhatsApp users may send messages to reveal their location in real-time. They can also set up address books so that they may send messages to big groups of people in WhatsApp group talks quickly. The best advantage of WhatsApp is that it allows users to communicate with those who live overseas without experiencing international text messaging expenses.

E-Mail

E-mail is a critical component of any Web 2.0 strategy. You'll be at a severe competitive disadvantage in around five months if you don't include e-mail in your media strategies, site development plans, or overall strategy. Electronic mail, often known as email, is information stored on a computer that is sent between two users via telecommunications. E-mail is a communication that includes files, text, photos, or other attachments that is transmitted via a grid to a particular person or a group. Ray Tomlinson is responsible for sending the first e-mail in 1971. The electronic mail was transmitted to Tomlinson as a test e-mail message, with the content "something like QWERTYUIOP." Although he sent the email to himself, the message was nonetheless transmitted across ARPANET.

E-mail address overview

Breakdown of an e-mail address

E-mail Address Overview

support@computerhope.com

| User or group | At | Domain |
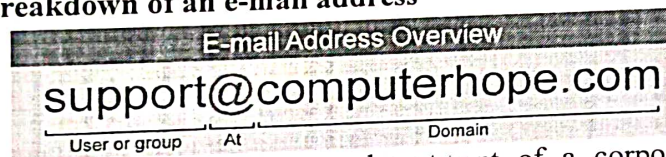
The alias, user, group, or department of a corporation appears in the first component of all e-mail addresses, before the @ sign. In the example above, "support" refers to Computer Hope's Technical Support department. Following that, the "@" (at symbol) is an e-mail address divider; it's been necessary for all SMTP e-mail addresses since Ray Tomlinson delivered the first message. Finally, the domain name of the user's home is "computerhope.com." The TLD (top-level domain) for our domain is ".com."

Steps for Writing an E-Mail

An E-mail message should resemble the sample window below while being written. As you'll see, while sending an email, various fields are necessary.

- ❖ **To**: The 'To' box contains the e-mail address of the person who will receive the message.
- ❖ **From**: 'From' field should contain the email address from which we are sending the email.
- ❖ **Subject**: The 'Subject' acts as the abstract or heading of the email. The title tells the reader about the topic discussed in the email without opening and reading the entire message. This field is not mandatory to fill.
- ❖ **CC ("Carbon Cop")**: You can name recipients who are not direct addressees in the CC ("Carbon Copy") box (listed in the "To" field). You could, for example, send an email to Jeff and CC Linda and Steven. Although the e-mail is addressed to Jeff, a copy is sent to Linda and Steven, and everyone can see who got it. This field is not mandatory to fill.
- ❖ **BCC ("Blind Carbon Copy")**: The BCC ("blind carbon copy") field is similar to the CC field, with the exception that the recipients are unknown. Each BCC receiver receives the e-mail, but they are ignorant of who else acquired a copy. All receivers can view the addressees (anyone named in the "To" box). This field is not mandatory to fill.
- ❖ **Message Body**: The Message Body, last but not least, is where you type your main message. It normally features your signature at the bottom, much like a handwritten letter.

Advantages of E-Mail

There are several advantages to using e-mail instead of conventional mail. The following are some of the most significant benefits.

> **Free Delivery** - Sending an e-mail is essentially free, save from the cost of an Internet membership. A letter does not require a postage stamp to be mailed.

> **Global Delivery** - E-mail may be sent to any country from practically anywhere on the earth.

> **Very Fast delivery** - Over the Internet, an e-mail may be sent and received quickly by the receiver.

> **File Attachments** - E-mails can include one or more file attachments, allowing individuals to send and receive documents, photographs, and other files over email.

> **Long-term Storage** - E-mails are saved in an electronic format, allowing for long-term storage and archiving.

> **Environmentally Friendly** - Sending an e-mail requires no paper (paperless), cardboard, or packaging tape, which saves paper.

Conclusion

Thus, we can say that Web 2.0 tools such as social media, blogs, wikis, instant messaging, and as well as social networking sites such as Facebook, and Twitter are discovered to be the most often utilised social media sites by

215

Registrar
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Moradabad.

all people. In recent times the popularity and the use of 2.0, its various tools and social media among young adults and students is rapidly increasing day by day. The popularity of the internet and web 2.0 tools is growing among educated people, particularly college and university students. The internet and web 2.0 tools have a significant impact on people's sociocultural lives as well as youth behaviour. Web2.0 refers to the growth of online services that promote collaboration, communication, and information sharing. It marks a move from a passive "read-only" web page experience to a participation experience with dynamic and interactive web pages. Thus, we can say that in recent times life cannot be imagined without social media and networking.

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