Learning Material

on

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Universal Access & Digital Devide

Universal access to ICT is the ability of all citizens to have equal opportunity in ICT with special reference to education, regardless of their social class, gender, ethnicity background or physical and mental disabilities. Universal access to ICT encourages a variety of pedagogical approaches to accomplish the dissemination of knowledge across the diversity of social, cultural, economic, national and biological backgrounds. It is to foster themes of equal opportunity of education.

Defining the "Digital Divide"

The twenty-first century witnessed a havoc increase in the interaction between human and computers . The ability to access computers and the internet has become increasingly important for economic, political, educational and social aspects of the world. However, not everyone has access to this technology. The term **"digital divide"** refers to the growing gap between the underprivileged members of society, especially the poor, rural, elderly, and handicapped portion of the population who do not have access to computers/IT gadgets or the internet; and the wealthy, middle-class, and young living in urban and suburban areas who have access.

The IT@School Project: It is an information technology project under the Department of General Education, Government of Kerala in India. Launched in 2001, the Project has remodeled conventional teaching methodologies in classrooms through the use of IT. The project was being implemented in over 12,000 schools in the state of Kerala, and also in schools in Mahé, Lakshadweep . An estimated 50 lakhs students and 2 lakhs teachers were part of this project, with a network of 160 "master trainers" and 5600 school IT co-ordinators statewide, who are school teachers themselves. The project also conducts specialized training for visually challenged teachers in that state.

NMEICT

Full form : **National Mission on Education through Information and Communication Technology (NMEICT)**

The National Mission on Education through Information and Communication Technology (NMEICT) has been envisaged as a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions in any time any where mode. This was a major intervention in enhancing the Gross Enrolment Ratio (GER) in Higher Education by 5 percentage points during the XI Five Year Plan period.

Objectives of NMEICT

The three cardinal principles of Education Policy viz., access, equity and quality could be served well by providing connectivity to all colleges and universities, providing low cost and affordable access-cum-computing devices to students and teachers and providing high quality e-content free of cost to all learners in the country. NMEICT encompasses all the three elements. The Mission has two major objectives:

a) **Providing connectivity** (along with provision for access devices, to institutions and learners)

b) **Content generation**.

It seeks to bridge the digital divide, i.e. the gap in the skills to use computing devices for the purpose of teaching and learning among urban and rural teachers/learners in Higher Education domain and empower those, who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy. It focuses on appropriate pedagogy for e-learning, providing facility of performing experiments through virtual laboratories, on-line testing and certification, on-line availability of teachers to guide and mentor learners, utilization of available Education Satellite (EduSAT) and Direct to Home platforms, training and empowerment of teachers to effectively use the new method of teaching learning etc.

Gyan Darshan

Gyan Darshan (GD) is a satellite-based educational T V channel which was started on 26th January, 2000. It carries not only the educational videos of IGNOU, but also those of other major educational organizations like the UGC, CIET-NCERT, NIOS, IITs, TTTIs and also developmental and cultural programmes intended for the public at large. Operating through a Cband transponder on INSAT 3C as a free-to-air channel on a round the clock basis, the channel has been upgraded as a completely digital one with effect from 26th January, 2003. The Gyan Darshan channels can be accessed through a local cable operator or through a dish antenna equipped for digital reception on C-band from INSAT 3C (downlink frequency: 4165 MHz. Symbol rate: 26000).

In its present digital configuration, the Gyan Darshan offers the following channels:

GD-1: The main educational channel catering to all sectors of education.

GD-2: Interactive channel consisting of live teleconferences, telecounselling sessions etc.

GD-3: Technology education channel consisting of programmes pertaining to engineering topics. The programmes are sourced from various IITs.

GD-4: The fourth channel Gyan Darshan- Vyas brings quality education to the students pursuing higher education. Provision also exists for starting some more channels, planned to be dedicated to agriculture, vocational education and school education respectively.

Gyan Vani FM

Conceived as a joint venture between MHRD and IGNOU, the Gyan Vani FM project comprises a network of 40 FM Educational Radio Stations located in different places across the country. Ten of these stations are already operational, viz., Allahabad, Bangalore, Bhopal, Coimbatore, Lucknow, Mumbai, Vishakhapatnam, Delhi, Chennai and Kolkata. Each Gyan Vani radio station caters to a service area of around 60 km radius and can be received on normal FM radio sets. The programming mainly aims at local educational needs in the local language. The help of local educational institutions and educationists is sought in programme production. Live programmes with phone-in interactivity is a notable feature of Gyan Vani stations, which are particularly popular with the student population.

SAKSHAT: A One Stop Education Portal

The project SAKSHAT: A One Stop Education Portal launched on October 30, 2006 by His Excellency, the then President of India to facilitate lifelong learning for students, teachers and those in employment or in pursuit of knowledge free of cost to them. The content development task for ‘SAKSHAT’ was looked after by the Content Advisory Committee (CAC) for the respective subject, which consisted of representatives from educational institutions like IGNOU, Delhi University, Kendriya Vidyalaya Sangthan (KVS), Navodyaya Vidyalaya Sangthan (NVS), National Institute of Open Schooling (NIOS) and National Council for Educational Research and Training (NCERT) and prominent academicians in the field. In addition, some NGOs had also provided the contents developed by them free of cost for this portal.

The vision is to scale up this project 'SAKSHAT' to cater to the learning needs of more than 50 crore people through a proposed scheme of 'National Mission in Education through Information and Communication Technology (NMEICT). The scheme is to provide connectivity to all institutions of higher learning to world of knowledge in the cyber space, to leverage the potential of ICT, in providing high quality knowledge modules with right e-contents, to address to the personalized needs of learners, in order to take care of their aspirations. These modules are to be delivered through 'SAKSHAT'. The scheme may also have a provision of certification of competencies of the human resources acquired through formal or non-formal means as also to develop and maintain the database of profile of human resources.

Haptic Technology

Haptic Technology is the science of applying touch (tactile) sensation to control the interaction with computer applications. The word derives from the Greek haptein meaning "to fasten." By using special input/output devices (joysticks, data gloves or other devices), users can receive feedback from computer applications in the form of felt sensations in the hand or other parts of the body. In combination with a visual display, haptics technology can be used to train people for tasks requiring hand-eye coordination, such as surgery and space ship maneuvers. It can also be used for games in which you feel as well as see your interactions with images. For example, you might play tennis with another computer user somewhere else in the world. Both of you can see the moving ball and, using the haptic device, position and swing your tennis racket and feel the impact of the ball.

Reverse electrovibration, also known as virtual touch, is one area of haptics used with VR and augmented reality (AR) technology. Virtual touch facilitates electronic transmission of human tactile stimuli, allowing end users to perceive the textures and contours of remote objects. Besides conveying the feel of everyday objects, the technology can also be used to enhance accessibility, for example through the transmission of Braille characters.

Microsoft Office

Microsoft Office is a suite of products developed by Microsoft Corporation that includes Microsoft Word, Excel, Access, Publisher, PowerPoint, and Outlook etc.

Each program serves a different purpose and is compatible with other programs included in the package.

MS Office packages

Microsoft Word: a word processor included Microsoft Office and some editions of the nowdiscontinued Microsoft Works. The first version of Word, released in the autumn of 1983.

Microsoft Excel: a spreadsheet released for the first version in 1985, and the first Windows version in 1987.

Microsoft PowerPoint: a presentation program used to create slideshows composed of text, graphics, and other objects, which can be displayed on-screen and shown by the presenter or printed out on transparencies or slides.

Microsoft Access: a database management system for Windows .

Microsoft Outlook : a personal information manager.

Microsoft OneNote: a notetaking program that gathers handwritten or typed notes, drawings, screen clippings and audio commentaries.

Microsoft Publisher: a desktop publishing app for Windows mostly used for designing brochures, labels, calendars, greeting cards, business cards, newsletters, web site, and postcards

Examples of various Word processors and Spreadsheets

Word processors – MS Word, Libre Office, Google Docs, Zoho writer, LaTex

Spreadsheets -- MS Excel, Gnumeric, KSpread, LibreOffice Calc, NeoOffice Calc, Siag

Role of Mail Merge in Educatinal Institutes

Mail merge is a powerful tool for writing and sending a large scale personalized letter or e-mail to many different people like guardians, students, administrators at the same time. We can also use it to create envelopes or labels with each recipient' information. Mail Merge imports data from another source such as Excel and then uses that data to replace placeholders throughout your message with the relevant information for each individual you are messaging. We can use it to quickly create personalized messages for hundreds of people at once.

Mail merge function in MS Word 2007

Mail Merge Wizard

1) To start a mail merge, open Microsoft Word 2007, and click on the Mailings tab.

2) Find the Start Mail Merge button under the Mailings tab and click the arrow beside it. Choose the last option, Step by Step Mail Merge Wizard.

3) This brings up the task pane as shown below. Select Letters (or whatever type you suits the job your working on.

4) Select template.

5) Select recipients.

6) Select Use an existing list or new list

7) Select whatever you named the range in your spreadsheet containing the names and addresses you want to use for the mail merge

.

8) You can sort and filter the list.

9) Next: Complete the merge,

10) Next, click on the link Edit individual letters – all - ok

11) Print

MOOCs

A **massive open online course (MOOC**) is an online course aimed at unlimited participation and open access using the internet platform. In addition to traditional course materials such as filmed lectures, readings, and problem sets, MOOCs can provide interactive user forums to support community interactions among students, professors, and teaching assistants . MOOCs are a recent and widely researched development in distance education which were first introduced in 2006.

MOOCs in India

SWAYAM launched in 2016, is an an example of MOOC providing opportunities for a life-long learning. Here learner can choose from hundreds of courses , virtually every course that is taught at the university / college / school level and these shall be offered by best of the teachers in India and elsewhere. If a student is studying in any college, he/she can transfer the credits earned by taking these courses into their academic record. If the studens are, working or not working, in school or out of school, SWAYAM presents a unique educational opportunity to expand the horizons of knowledge. All courses would be offered free of cost under this programme however fees would be levied in case learner requires certificate.

In the first phase, IIT Bombay, IIT Madras, IIT Kanpur, IIT Guwahati, University of Delhi, Jawahar Lal Nehru University, IGNOU, IIM Bangalore, IIM Calcutta, Banaras Hindu

University, alone as well as with the help of faculty from foreign universities will be offering courses in areas of engineering education, social science, energy, management, basic sciences. At least one crore students are expected to benefit in 2 to 3 years through this initiative.

Digital Age

The Digital Age is a period in human history characterized by the shift from traditional industry that the Industrial Revolution brought in, to an economy based on digitised (computerized) information. It is often called as the Information Age, Computer Age or New Media Age.

Educative role of Social Media

Social media and networking can allow students to access a variety of knowledgeable peers, parents, community members, children's literature authors, academics and other people who might not otherwise be available. Teachers across the world have had their students write blog posts for certain assignments and then share their assignment to their accounts. Here the students can enjoy feedback from not only their teacher but also from others who have read their assignment . Teachers also use social media tools to hold review sessions for their classes in out of school hours and to support one another. This gives the teachers more time to teach in class rather than answering questions and clarifying because of the extra time they had to review with their students through social media. Having these social media tools in class also helps students ask their peers or teachers questions out of school when studying, motivated or confused. Social media can also provide motivation for students who might learn or put forward more effort because students know their work is being shared with audiences such as their classmates, families or other classes around the world. Students will also know that their family, such as their parents or guardians, can follow their class or school social media accounts to see examples of their work and learning from the students and teacher. Social media can also impact how learning occurs by all students engaging in conversation rather than just a minority of the class. It can help bring a more diverse set of perspectives into the classroom since all of the students are voicing their opinions, especially the quieter students who do not like voicing their opinions in class.

Some prominent social media sites are Whats app, Facebook, Twitter, Linkedin, Youtube, Instagram etc.

Safe surfing mode

It is a diagnostic mode of a computer operating system (OS) intended to help fix most of the internet related threat to the PC and personal info. It is also widely used for removing scoundrel security software. Many people use the Internet on a daily basis without trouble, but it can harbor some hidden dangers to you and your computer. These risks can include exposure of sensitive personal information and infection by malware, which includes viruses, spyware, and adware. Safe browsing means being aware of these online threats and taking the necessary steps to avoid them.

Guidelines to protect your personal information and your computer while online.

a) Update Web browsers regularly and enable security features
b) Install protective software – Anti Virus
c) Guard personal information- trust only "https" sites.
d) Be wary of Internet downloads

Message Currency & Credibility

Social Media and all the related tools are creating a new currency whose worth increases over time. We call this **Message Currency** and it is created by the propagation of your conversation and its relevance to your audience. Message currency is created by people who share their enthusiasm for a topic, a conversation, with their peers. Because conversations are peermediated, they have more authority—this much we know already. However, what Message Currency reveals to us is the value conversations create which is reflected by endorsement, or propagation of a conversation by the community of peers.

A conversation turns to currency when people discover something meaningful in a "Message" experience, they are prepared to spread the conversation as if it were their own. Conversations about brand experiences, topical perspectives and innovative ideas have become a new currency. Today value added conversations are increasingly creating a draw to people whom have an affinity to a brand, an experience or a topic of interest. What we consume and how we consume it are important parts of developing "Message currency. Message currency is created by the propagation of a conversation by others that incorporate your conversation into their own narratives. The more valuable your conversation is the more likely they are to be propagated by others.

Message credibility refers to the perceived belief of Message content "beyond any proof of its contentions". Message credibility has shifted the focus from characteristics of individual, personal sources to characteristics of Message behaviors such as objectivity, accuracy, fairness, and lack of bias. Empirical research has found that Message credibility is an important part, along with message characteristics and audience characteristics, of effective communication.

Credibility is a core value of journalism. Credibility also is essential to the business aspect of the Message. Loss of credibility may translate to loss of audience. Because the Message occupies a significant part of people's daily lives, it significantly impacts the social construction of reality, the shape of public consciousness and the direction of sociopolitical change. Therefore, Message's credibility is as important as the message itself.