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PROGRESS TOWARDS INFO AND COMMUNICATION TECHNOLOGY IN LIBRARY COACHING, EDUCATION AND TECHNOLOGY: ISSUES AND CHALLENGES

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ABSTRACT----The paper discusses varied problems associated with ICT in library with regard to current digital era. Library and data Services(LIS) areaunit being rework ed by technology and that they got to adapt to those changes to fulfil their users' dynamical desires and growing expectations. Apace developing data and communication technology area unit making new opportunities and challenges for ancient libraries. The new trend world over is to manoeuvre towards digital assortment. Existing libraries area unit busy digitizing their ancient collections via on-line subscriptions and designing, design, preparation and inprogress operat ions management and technical support of and ICT infrastructure. ("ICT" is Associate in nursing form for "Information and Communication Technology") data and Communication Technology road and rail network and also the library personnel comprise 2 vital resources needed for digital library comes. Actual needs rely on nature of the digital library assortment (one-off or live collection) and on factors like volume of supply material to be digitized, information needs, document formats to be supported, search and retrieval potential and quality needs. Hardware needs embrace server pc for hosting the gathering, desktop computers, digitisation instrumentality, network property, and different tools. Digital library code is another vital technology part. Choices include: Open supply free digital library code, library automation code, industrial digital library code and in house code development in fashionable society.

KEYWORDS: Information Communication Technology, Data Services, Digital Library, Education.

I. INTRODUCTION

The twenty first Century has clearly shownthat info provides stunning opportunit ies that alter all-around growth and development. No one will deny that the readying of data of knowledge technologies have deeply altered not solely the means we have a tendency to live and work however conjointly our reading primarily sterilization and redefining our outlook concerning information and its modes of dissemination. It's pertinent to underscorethatlearning isn't just info commu nication. Experiences, the planet over, have indicated the positive changes that info technology will have in on

condition that services that ameliorate the conditions of the underneath privileged. it's more and more felt that deploying the proper technologies will go a protracted mean sin making, nurturing human and social capital. Increasing information has positive cascading impact by up productivity, aggressiveness, wealth and prosperity excluding up the standard of services and their delivery systems. This paper can discuss issues, problems and solutions that will facilitate in deploying info and communications technologies in library coaching and better education.

The paper argues that it's imperative for the professional to become 'digitally fluent' instead of just 'digitally literate' Library relies relative on life and alter. While not the human and directorial changes that occur, the library would neither operate properly nor meet its functions. Dr. S.R. Ranganathan, the daddy of library and data science, developed the 5 famed laws of library and data science. The fifth law-"Library could be a growing organism" is currently being challenged by the tremendous progress of ICT and its speedy application all told fields, particularly within the field of library and data science. Info associate degree technology (ICT) is an umbrella term that has all technologies for the direction and communication of data. The term is usually employed in preference to info Technology (IT), significantly in 2 communities: education and government. Although, within the common usage it's usually assumed that ICT is substitutable with IT; ICT actually encompasses any medium to record info (magnetic disk/tape, optical disks (CD/DVD), non volatile storage etc. and arguably conjointly paper records); technology for broadcasting info - radio, television; and technology for human action through voice and sound or pictures - electro-acoustic transducer, camera, loudspeaker system, phone phone to cellular phones. Thus, "ICT" makes a lot of specific that technologies like broadcasting and wireless mobile telecommunications area unit enclosed.

The Internet in Asian nation started off within the late 1980's once Education and analysis Network (ERNET) was launched, with funding from the Department of natural philosophy (DOE), Government of Asian nation and UNDP. The project concerned variety of premier institutions: the National Centre for package Technology (NCST), Mumbai; the Indian Institute of Science (IISC), Bangalore; the 5 IIT and also the DOE. The second major networking initiative was the National IP Centre (NIC). For the normal voters of India Republic of Asian nation the web arrived in India on fifteenth August, once VSNL launched its services.

Information and Communication Technology

The term "Information and Communication Technology" describes the employment of computer-based technology and also the net to create info and communication services on the market to a good vary of users. The term is employed generally to handle a spread of technologies, together with telephones and rising technology devices. Central to those is that the net, that provides the mechanism for transporting knowledge in an exceedingly variety of formats together with text, images, sound, and video.

Objectives of (ICT) info and Communication Technology

- To give larger and easier access information
- To permit access to computers and also the net for everyone, in order that a divide doesn't build up

between people who don't possess computers

- To assist individuals to develop their ICT skills for accessing info.
- To offer access to digital learning materials, that square measure set to extend in each quality and amount.
- To give workers experience to hunt out info or learning materials-staff become ball-hawking gatekeepers not simply of written sources however of the digitized ones too.

Advantages of (ICT) info and Communication Technology

Before embarking on AN elaborate discussion of the problems concerned in library coaching by deploying ICT, it's essential to grasp the benefits of ICT in an exceedingly Library state of affairs. These benefits include:

- Opportunities to deploy innovative methodologies and to deploy a lot of fascinating material that makes an interest within the librarians;
- Enables higher management of library a professional person thereby increasing the productivity of the tutor additionally because they taught;
- Enables the professional person to focus on different tasks like analysis and consultancy;
- Enables optimum utilization and sharing of resources among establishments thereby reducing the prices of implementing ICT solutions.

Table 1.Some prominent software's successfully installed in many universities are the following:

S. No.	Name of Application Software	Name of the Organization/Institution
1.	LIBSYS	Libsys Corporation of India, New Delhi
2.	SOUL	INFLIBNET, Ahmedabad
3.	LIBMAN	R.S. Enterprise, New Delhi
4.	TLMS	OPAC Infosys Pvt. Ltd. , Pune
5.	ALICE	Softlink Asia, New Delhi
6.	BASIS PLUS & TECHLIB	National….Informatics Centre, New Delhi
7.	DEL-WINDOWS	DELNET, New Delhi
8.	CDS/ISIS (Win.)	UNESCO, distributed by NISSAT, DST, New Delhi

While choosing theautomation code it's vital that it's all the modules needed to hold out all routine works of the university library. It ought to even have on-line Public Access Catalogue (OPAC) and UNICODE module for handling all the Indian and foreign languages different then English. Over and higher than, the code ought to be user friendly.

Table 2.Classification of Library Software Packages according their Operating Systems and Minimum Hardware Requirements.

Sl.No	Software Packages	Operating System	Minimum Hardware Requirements
1	Basispplus and Techlibplus	UNIX SVR 4.0 or above	Basis server Intel 80x86, Pentium RAM 16MB, 150MB Cartridge Basis client Intel 80386 MS-window 3.1 RAM 4MB but 8MB preferred HD 16MB, 20MB, TCP/IP, PC-NFS
2	Granthalaya	1. MS DOS 6.0 and above 2. SCO UNIX ver 5.3.2 3. Ingres Ver 6.2 or above 4. Oracle ver 6.2 or above	PC-AT 486 RAM 8MB HD 540MB
3	Krveger Library Manager	MS DOS	PC XT/AT
4	Librarian	XENIX LAN	PC-AT 386
5	Libsys	1.MS DOS 6.0 and above 2. SCO XENIX 3.SCO UNIX 4.VMS or ULTRIX 5.NOVEL LAN	PC-AT PC-AT PC-AT 386/486, Motorola 68000/tntel 386/486 based mini Micro VAX
6	Maitrayee	UNIX 3.2	PC-AT 386
7	Sanjay (ver 2.0)	1.MS DOS ver 3.2 or above(developed by augmenting CDS/ISIS (V 2.3)	PC-AT, 1MB RAM and 40 MB HD
8	Suchika	MS-DOS 6.0 on higher -UNIX -LAN	PC-AT 486 8MB RAM 540 MB HD PC-AT 486 or above 8MB RAM 540 MB HD
9	Tulib	UNIX	PC-AT
10	Ulysis	XENIX UNIX	Wipro PC-AT Wipro S-682 & wipro 5.386
11	Wilsys	UNIX	PC-AT 386

Information and Communication Technology Infrastructure for a Typical Digital Library Project. A digital library project would usually need following equipment:

- Server pc
- Desktop pc
- Client pc
- Digitization instrumentation
- Network property
- Other instrumentation

Information and Communication Technology parts

ICT applications want effective info networking equally distributed over the country and supported by personnel proficient in ICT. Major parts of knowledge infrastructure are:

- Electronic Communication Infrastructure
- Online info repositories

- Legal Framework
- ICT proficient manpower.

Information and Communication Technology in Libraries.
The first and foremost ICT part, which may be adopted within the libraries, is that the pc for library automation associated to possess an in-house info of library holdings in electronic kind. As several primary journals and being printed in CD kind, it becomes necessary to equip the libraries to optimize the employment of knowledge. E-mail, on-line retrieval
networking, transmission and net area unit the opposite necessary technologies, which may be used for quicker access to info. ICT permits one:

- To capture, store, manipulate, and distribute information;
- To introduce and supply new services, revitalize the prevailing services by providing quicker access to the resources, by overcoming the area and time barriers;
- To offer need-based, (tailor made), browsing and retrospective search services to the users;
- To have sizable amount of databases in CDs;
- To utilize the employees for providing higher info services;
- To develop/upgrade the talents of professionals;
- To encourage networking and resource sharing at native level;
- To have access to variety of national and international journals that area unit being printed solely in computer code form;
- To change the documents for preservation and for area saving;
- To support library functions like circulation,
  serials management,
  acquisition management, stock maintenance
  and different routine workplace work s and developing in-house database;
- To retrieve and bare the knowledge in user-defined format;
- To access library catalogues databases of different libraries through library networks;
- To improve the potency of library functions; and
- To improve the value effectiveness of library operations.

Selection and get of Library Automation Application software system. In Asian nation there are a unit over a dozen of library automation application software's. The developers of
those software's embody each government a nd personal organizations.

CONCLUSION

Supported the collected knowledge some suggestions area unit suggests here for improvement. The state of ICT application in Asian country is at the minimum stage. Therefore it's instructed that the involved authority ought to offer priority to enhance true. Most variety of computers with net facility ought to be put in in libraries so as to form awake to the importance of ICT and importance of library in education automation of all the activities of the libraries ought to be created therefore on address the new challenges. A lot of ICT services ought to be provided. There ought to be further regular power provide for pc users so as to stay time issue in order that a lot of intention can arise within the use of ICT facilities within the libraries. Lastly, adequate fund ought to be provided from the involved authorities to enhance ICT services.

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SCOPE

Topics of interest include, but are not limited to:

- System Performance Understanding
- Active Learning
- Case-Based Learning
- Collaborative Learning
- Educational Technology
- Problem-Based Learning
- Peer Learning
- Web-based Training
- Virtual Learning
- Team Teaching
- A Multi-perspective Digital Library
- Detecting Plagiarized Programs
- Linearization technique
- Phylogenetic Tools
- Synoptic Assessment for Students
- Integrated System for Interaction Support
- Automated Assessment
- Affective Imagery Surveys
- E-learning
- Teaching Software
- Ambient Intelligence
- Computer Assisted Assessment
- Online Concept Formation
- Integrated Online Courseware
- Learning by Game-Building
- Learning Styles
- Strategies Sessions
- Multiple Implementation Languages
- New Interactive Tools
- Pattern -Oriented Instruction
- Explorative Learning
- Outcome-based Approach
- Environmental dynamics
- Global environmental change and ecosystems management
- Environmental restoration and ecological engineering
- Environmental sustainability
- Health and the Environment
- Water resources and river basin management
- Wastewater and sludge treatment
- Air pollution and control
- Solid waste management
- Water treatment and reclamation
- Water Pollution and Water Quality Control
- Rivers, Lakes and Estuary Systems
- Watershed Management
- Water Resources and Quality Assessment
- Non-point Sources
- Contaminant Transport in Groundwater
- Wastewater Discharge Management
- In-Situ Measurement and Monitoring
- Drinking Water Purification
- Drinking Water Pretreatment and Protection
- Nitrogen-Phosphorus Wastewater Biotreatment

- Sludge Biotreatment
- Industrial Wastewater Biotreatment
- Municipal Wastewater Biotreatment
- Adsorption for Wastewater Treatment
- Physico-chemical Wastewater Treatment
- Reactions and Degradation of Wastewater Contaminants
- Pollution and Air Quality Control
- Aerosol
- Air Quality Assessment
- Transport of Air Pollutants
- Air Pollution Prevention Waste Gas Control Techniques
- Air Pollutant Monitoring
- Hazardous Gas Biofiltration
- Catalysts for Reducing Emission
- Air Pollution Prevention
- Noise
- Land (Soil, Waste Solid) Pollution and Remediation
- Contaminant Transport in the Subsurface
- Natural Attenuation of Contaminants
- In-Situ Remediation
- Solid Waste Management
- On-site and Off-site Remediation
- Landfill
- Biotransformation
- Permeable Reactive Barriers
- Waste Fuel Site Remediation
- Waste Recycling
- Radioactive and Mixed Waste
- Ecosystem Restoration
- Restoration of Ecosystems
- Nutrients and Functions of Ecosystems
- Ecosystem Assessment
- Urban Ecology
- Bio-Assessment and Toxicology
- Human Exposure
- Bio-response
- Bioavailability and Bio-accumulation
- Ecotoxicology
- Microbiology and Microbial Degradation
- Detection and Decontamination of Dangerous Biological Agents
- Wetlands
- Conservation and Geochemical Processes of Wetlands
- Wetlands for Wastewater Treatment
- Sediments
- Contaminated Sediments
- Assessment and Remediation
- Global Change
- Metals
- Metal Distribution
- Metal Behavior and Remediation
- Speciation and Bioavailability
- Phytoremediation and Zoo-remediation
- Organic Pollutants
- Characterization of Organic Pollutants
- Degradation of Organic Pollutants
- Transport and Remediation
- Modeling
- Environmental Process Simulation
- Water Quality Modeling
- GIS, Statistics, and Remote Sensing
- GIS for Environmental Assessment
- Data Management and Statistics
- Environmental Remote Sensing Applications
- Environmental Analysis and Measurements
- Environmental Analysis
- Field Measurement Technologies
- Sampling Automation
- Environmental Monitoring
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- Environmental Ethics
- Economics and the Environment
- Environmental Education
- Environmental NGO
- Environmental Planning and Management
- Environmental Quality Assessment
- Ecology Planning
- Regional Environmental Planning
- National Environmental Planning
- Environmental Policy
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