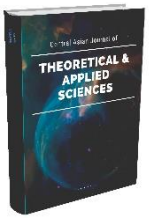

CENTRAL ASIAN JOURNAL OF THEORETICAL AND APPLIED SCIENCES

Volume: 01 Issue: 01 | Oct 2020 **ISSN:** xxxx-xxxx

Digital Education Plays A Role Of Library: A Comparative Study In Digital Era

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Available online at: www.cajotas.centralasianstudies.org/index.php

Received 22nd August 2020, Accepted 15th September 2020, Online 10th October 2020

Abstract **-** Technology now-a-days has entered into every walk of life i.e., digitalization now a part and parcel of our human life. In present era we can't live without electronic devices. After coming Digital India project, the growths of technology are increasing leaps and bounds. In the age of information technology and information explosion era, the information communication technology (ICT) plays a vital role in the development of education and library, also helps to improve the quality of services. Digital revolution has transforming the way of children and young people play, access of information, communicate with each other, learn, re-learn and un-learn. But now, this revolution has profoundly entered in the Education sector and also at school level, College level and University level. Due to this, most of the teaching and learning processes in the classrooms these days are changing from autocratic style to democratic or participatory style where learners also teachers, instructors and higher faculties are plays an active role. Except learners, all are facing unprecedented changes with often larger classes, more diverse students with diverse needs, demands from state, society and employers who want more accountability. The research design undertaken for the comparative study was descriptive research in nature. Only literature survey and SWOT analysis method used to analyse theoretical studied data and results of the study shows that digital education or library over the traditional education or library has both positive-negative impact on our daily life and society. This paper examines the importance, advantages and limitations of digital education or library over the traditional education or library were emphasized. The comparative analyses of the two types of libraries were also discussed. Governments in all tiers of the nation and legislators were advised to make policies and legislate bills respectively that can advance the present state of the national grid and improve on the internet technology infrastructures which are major factors that can drive digitization.

Keywords *- Digital and Traditional education, Digital and Traditional library, ICT, Digitalization et….*

I. SECTION – I. PREAMBLE

In this era of technology, the digital revolution has transformed almost everything from our work at our organizations to our daily routines. Now, we talk of use of interactive smart boards, hybrid or blended learning, flipped classrooms and digital libraries etc… during teaching-learning processes. Due to this, most of the teaching and learning processes in the classrooms these days are changing from autocratic style to democratic or participatory style where learners play an active role. On the other hand, Teachers, Instructors and Higher Faculties are facing unprecedented changes with often larger classes, more diverse students with diverse needs, demands from State, Society and employers who want more accountability and above all, all this with ever changing technology. To handle change of this nature, the role of a teacher and instructor becomes more challenging and demanding and hence requires attention. Thus the teachers in this ever changing digital era need a good balance of theoretical and practical knowledge to provide a solid foundation for their teaching.

II. EDUCATION

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. Educational methods include storytelling, discussion, teaching, training, and directed research. Education frequently takes place under the guidance of educators; however learners may also educate themselves. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. The methodology of teaching is called pedagogy. Formal education is commonly divided formally into such stages as preschool or kindergarten, primary school, secondary school and then college, university, or apprenticeship. A right to education has been recognized by some governments and the United Nations. In most regions, education is compulsory up to a certain age. There is a movement for education reform, and in particular for the evidence-based education.

III. LIBRARY

A library is a curated collection of sources of information and similar resources, selected by experts and made accessible to a defined community for reference or borrowing. It provides physical or digital access to material, and may be a physical location or a virtual space, or both. A library's collection can include books, periodicals, newspapers, manuscripts, films, maps, prints, documents, microform, CDs, cassettes, video tapes, DVDs, Blu-ray Discs, e-books, audio-books, databases, and other formats. Libraries range widely in size up to millions of items. A library is organized for use and maintained by a public body, an institution, a corporation, or a private individual. Public and institutional collections and services may be intended for use by people who choose not to or can't afford to purchase an extensive collection themselves, who need material no individual can reasonably be expected to have, or who require professional assistance with their research. In addition to providing materials, libraries also provide the services of librarians who are experts at finding and organizing information and at interpreting information needs. Libraries often provide quiet areas for studying, and they also often offer common areas to facilitate group study and collaboration. Libraries often provide public facilities for access to their electronic resources and the Internet. Different types of libraries are,-

a) Academic libraries
b) Children's libraries
c) National libraries
d) Public lending libraries
e) Reference libraries
f) Research libraries
g) Digital libraries
h) Special libraries

Following is the two different Library Environments

Traditional	Library administrator, Classifier, Cataloguer, Classificationists, Indexer, Reference Librarian, Library science teacher, Thesaurus constructors, Bibliographer, Librametrician, Bibliometrician etc…
Digital	Generators, Gatherers, Recorders, Processors, Organizers, Disseminators, Retrievers, Preservers, Measurers, Compilers.

IV. DIGITALIZATION

Digitization, less commonly digitalization, is the process of converting information into a digital (i.e. computer-readable) format, in which the information is organized into bits. The result is the representation of an object, image, sound, document or signal (usually an analog signal) by generating a series of numbers that describe a discrete set of its points or samples. The result is called digital representation or, more specifically, a digital image, for the object, and digital form, for the signal. In modern practice, the digitized data is in the form of binary numbers, which facilitate computer processing and other operations, but, strictly speaking, digitizing simply means the conversion of analog source material into a numerical format; the decimal or any other number system that can be used instead. Digitization is of crucial importance to data processing, storage and transmission, because it "allows information of all kinds in all formats to be carried with the same efficiency and also intermingled". Though analog data is typically more stable, digital data can more easily be shared and accessed and can, in theory, be propagated indefinitely, provided it is migrated to stable formats as needed. This is why it is a favored way of preserving information for many organizations around the world.

V. DIGITAL EDUCATION

A digital education or collection or teaching-learning process is an online database of digital objects that can include text, still images, audio, video, or other digital media formats. Objects can consist of digitized content like print or photographs, as well as originally produced digital content like word processor files or social media posts. In addition to storing content, digital education provide means for organizing, searching, and retrieving the content contained in the collection. In present era, we get to see digital education is increasing leaps and bounds not only that, that spread in private tuition, school education, college education, and university education also.

Comparison between Digital and Traditional Education

Digital Education	Traditional Education
Online learning is inherently flexible.	Traditional learning is a lot more rigid.
Online-based courses and programs tend to offer cheaper options to learning than the traditional education options.	Traditional education might be insanely expensive; it does offer tangible learning programs and materials that match the amount paid.
Social Interaction to have indirect engagements	Social Interaction to have direct engagements
Equipments of education are – video conferencing, chats, softcopy etc…	Equipments of education are – face-to-face interaction, hardcopy etc…
In online courses actually follow the same model, with synchronous online class sessions and question-and-answer sessions that serve as instructor office hours.	In a traditional education, multiple students gather to learn at a specific time and place.

VI. DIGITAL LIBRARY

A digital library, digital repository, or digital collection, is an online database of digital objects that can include text, still images, audio, video, or other digital media formats. Objects can consist of digitized content like print or photographs, as well as originally produced digital content like word processor files or social media posts. In addition to storing content, digital libraries provide means for organizing, searching,

and retrieving the content contained in the collection. Digital libraries can vary immensely in size and scope, and can be maintained by individuals or organizations. The digital content may be stored locally, or accessed remotely via computer networks. These information retrieval systems are able to exchange information with each other through interoperability and sustainability.

Comparison between Digital and Traditional Libraries

Digital Libraries	Traditional Libraries
Print form	Digital form
Free and universal access	Free as well as fee based
One way interactions	Dynamic real time dialogue
Limited access points and centralized management	Unlimited access points, distributed collections and access control
Stable, with slow evolution	Dynamic and ephemeral

Source: *Library Philosophy and Practice, 2010*

VII. LIBRARIES AND EDUCATION

Generally libraries, both traditional and digital one have three roles in education: place for sharing reach information, maintaining ideas and give awareness to bring together individual with learning aims. Primary purpose of each library is supporting, facilitating, and expanding formal education in mother organization. Next step is to supporting informal education. Resources in libraries are collected to support learning. Digital libraries provide immediate access to a wide range of sources not exist physically, in a comparison with traditional libraries that are limited to place and time. Digital libraries without physical obstacles can provide resources via an internet connection each moment from each place. Because of these advantages, in digital libraries learning is independent process. Digital libraries provide appropriate opportunities for learners, because of including up-to-date information. Collecting multimedia resources made it possible to remote learning. Digital libraries by storing and feasible retrieve of educational resources from computer networks provided worth aid to electronic and networked learning. Without existence of organized and retained electronic resources by digital libraries, accessibility to up-to-date eLearning resources is impossible.

VIII. RESEARCH OBJECTIVES

The central objective of my empirical review study is to find out the trends in the coverage of role of digital education or library in the digital age. The objectives are –

- To understand the concept of education, library, digitalization, digital education and digital library etc…;
- To identify the present trends in the education and library education after digitalization;
- To evaluate and understand current set of challenges faced by teachers and students;
- To study the strength, weakness, opportunities and threats; and
- To submit the findings as an outcome of this empirical review research.

IX. RESEARCH LIMITATIONS

Due to time constraint this research review empirical study has been made on the basis of previous data i.e. secondary data. Those research gaps are huge and to be helped the future researcher when research on this topic. This study may be up-dated and redesigned by considering the latest available data. There is a lot of scope for further researches on this issue by considering other factors which I have not considered in my

present empirical study, it would have been more. However, all possible effort has been made to make the study successful.

X. RESEARCH LITERATURE REVIEWS

The efforts of those have been briefed out below;

Ka (2005) suggested that university libraries play a significant role in supporting research. University libraries do not just store books and journals and offer space for student learning, but they also provide systematically digitized information. University libraries, as they become more and more digitized, will play an important role in offering a greater support service for young professors and PhD students which will help in the development of their academic careers. Singh (2007) showed that research is taking on increasing importance in universities and colleges. Universities are making larger allocations for research and the rank of university is based on their research outputs. In order to satisfy the stakeholders of academic libraries, the role of academic libraries in facilitating research have to be re examined. In doing so, academic libraries could provide more effective services and supports to their users.

Webb (2007) highlighted that the effective academic library are gateways to academic knowledge through their own collection and by facilitating access to material. In the line with its core purpose, providing effective library services could support the research activities of researchers.

Haglund (2008) indicated that university libraries are dedicated to what they perceive as the needs of students and researchers at the university. Otherwise, they could not effectively assist the research activities, nor could they contribute to the university's research. Even though the literature has indicated that academic libraries play a significant role on facilitating research, the overall support of academic libraries for research was not strategic. Instead of developing an extensive research collection, the libraries relied heavily on inter-library loans to support research (Patterson 2009).

Rowley (2004) pointed out that librarians can promote the research culture among researchers. Currently, libraries are undergoing continual changes and development as library managers, information professionals, and knowledge workers need to manage and understand these changes to respond to the dynamic environments. Researchers could benefit from these changes.

Simmonds (2001) found that the use of academic libraries is influenced most by users' perceived familiarity with the library and its resources. Those who are more familiar with the library are more likely to use academic libraries. To motivate the greater usage of libraries, librarians need to educate users on how to use library resources not only in the confines of the library building, but even when they access the resources remotely.

DL has a very short history. According to Saracevic and Covi (2000), it was predicted in 1965 that future libraries will be highly innovative and different in structure, processing and through application as compared to a traditional library. At the end of 1990s research and practical development exploded in the field of library globally. In the 2000s growth of many different efforts related to digital libraries continued at a high speed. Nowadays, DL is the result of all the hard work which is being done in the previous decades.

As the academic environment is constantly changing, and with universities increasing their emphasis on research, academic libraries need to re-examine their role in assisting the users in their research. While there is much literature on the importance of academic libraries in assisting university research in general, there is little on the needs of specific groups of researchers, including the postgraduate students. Apart from Ka (2005) and Singh (2007) mentioned above, little was found on the needs of postgraduate students, their perceptions, usage and assessment of academic libraries. This study attempts to fill that gap.

XI. BACKGROUND OF THE STUDY

Technology is transforming the traditional methods of teaching and learning in the classrooms of the 21st Century. The goal is to create students who can become active, independent and lifelong learners rather than passive recipients of information. This new approach to education takes the student beyond the traditional text book and requires students to develop a combination of skills in computer technology, critical thinking and information-seeking strategies. The classroom teacher is the key to the success of an education program that promotes these qualities. Society has long viewed librarians as the acknowledged information experts. As modern-day librarians we represent a professional group that long ago learned to bridge the gap between the traditional methods and the modern technological techniques used in the organization, management and retrieval of information.

XII. NEED-IMPORTANCE-PURPOSE OF DIGITAL EDUCATION

Digital learning is replacing traditional educational methods more and more each day. With how rapidly classrooms are changing, it is best to forget methods you may remember from when you were in school and start thinking about newer teaching and learning techniques based on digital learning tools and technologies. The inclusion of digital learning in the classrooms can vary from simply using tablets instead of paper to using elaborate software programs and equipment as opposed to the simple pen. This could entail using sites, services, programs, teaching tools, and technologies like study aids built for at-home use. Even social networks and communications platforms can be used to create and manage digital assignments and agendas. Irrespective of how much technology is integrated into the classroom, digital learning has come to play a crucial role in education. It empowers students by getting them to be more interested in learning and expanding their horizons. Here is how digital learning is a step up from traditional education methods.

a) Digital Learning Makes Students Smarter
b) Digital Learning Is Making Students Self-Motivated and More Accountable
c) Digital Learning Tools Involve Educators and Parents to a Deeper Extent
d) Digital Learning Tools and Technology Is Rapidly Increasing Information Sharing
e) Increasing Students' Employability with Digital Learning Tools and Technology
f) Traditional Education Methods Have To Be Replaced

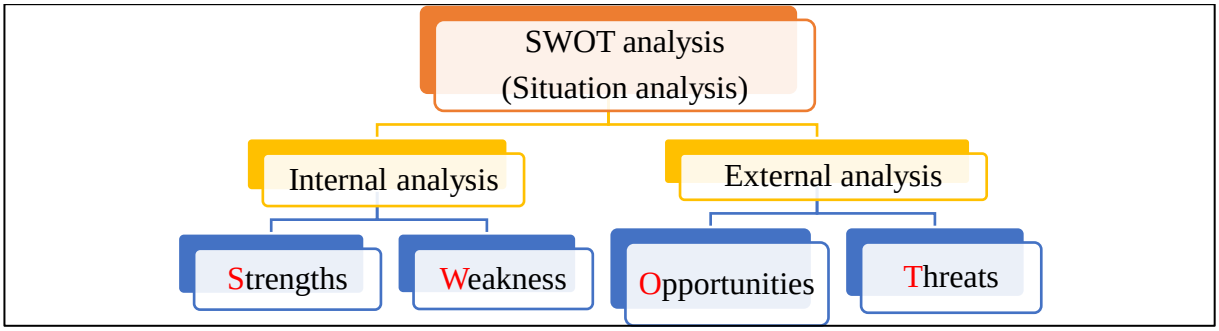
XIII. SECTION – II. RESEARCH METHODOLOGY OF THE STUDY

The present study is secondary in nature. I do not attempt has been made to include any statistical data in this investigation. The data used for the study has been collected from Books, Magazines, Newspapers, Research Articles or Papers, Journals, E-Journals Reports, Books, and on-line data bases. For that, I have used different government websites. On the basis of previous very few research documents on this kind of particular topic, the researcher makes SWOT analysis.

XIV. SWOT Analysis

The acronym SWOT stands for strength, weakness, opportunities and threats. It is also known as SWOT Matrix which is used to analyses the current state of product/service or objective with four elements are Strength, weakness, opportunities and threats. Strength represents positive aspects; weakness represents the negative aspects or the disadvantages, opportunities represents favorable condition prevails for its growth and threats as limitations or unfavorable conditions.

Chart1: SWOT Analysis



Source: *Author*

Strengths

- Independence of access to time and place
- Impartiality
- Enhancing the individual and group participation.
- Exposure to Global standard of education

Weakness

- Absence of teacher
- Access to unsupportive information
- Students' assessment and feedback is limited
- Being unsuitable for practical courses in agricultural education

Opportunities

- Enrollment of more number of students in Higher education
- Graduation without disturbing the Work-life Balance
- Time saving and cost efficient for learners
- Education to all category of pupil

Threats

- Threat to Uniqueness and consistency
- High implantation and maintenance cost
- Lack of technology and Infrastructure
- Security and authorization issues
- Lack of computer knowledge

Required Skills in Digital Era

- Technology or device knowledge
- Teaching skills
- Learning skills
- Networking skills
- Communication skills
- Thinking skills
- Nurturing skills
- Management of knowledge

XV. EPILOGUE

From the foregoing, it has been made abundantly cleared that digital education or E-library operation is far better than the traditional system, especially at this auspicious period when hardcopy documents or paper based materials are gradually facing out in all fares of human sectors. The paper reviews the relevance of Information Communication Technology (ICT) as related to other professions especially, the Library professions. The importance, advantages and limitations of digital library over the traditional library were emphasized. The comparative analyses of the two types of libraries were also discussed. Governments in all tiers of the Nation and Legislators were advised to make policies and legislate bills respectively that can advance the present state of the National grid and improve on the Internet technology infrastructures which are major factors that can drive digitization.

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