

ROLE OF MEDIA, INFORMATION AND COMMUNICATION TECHNOLOGY IN EDUCATION

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ABSTRACT

History of communication exhibits the facts as to whenever and wherever any new medium comes into the picture; it affects the communication patterns of the society. When telegram was invented, the significance of pigeon-courier started to decline. Similarly, when television arrived in communication expedition, radio went to the back stage.

The present article deals with recent developments in communication technology and their applications in social use and education for achieving wider social goals and research agendas embodied in theories of communication and development. Understanding the relationship between communication and development, the mass media helps to boost education event to the unfortunate. The first part the study deals with a short literature on modernization and its challenges. Promoting change in attitudes and behavior is one of the key elements of modernization that would be more consistent with those of persons in a modern society. The second part deals with dependency and active participation models applied to the development of communication system in education sector, media culture, the cultural environment prospective, role of telecommunication in development. The third part of the article deals with electronic media and open and distance education and issues and challenges related with them.

The Information and Communication Technologies (ICT) have become inevitable part of our life and plays a crucial role in education today. Due to the advent of technology in the rural areas, this technology can be used in spreading education. Methods of schooling and teaching are transforming with this new context. In spite of all the objectives and strategies that are focused on education, there are still some problems like teachers being indispensable part of our education system and needs to be trained with all the required skills.

KEYWORDS: Role of Media

INTRODUCTION

“Technology can become the “wings” that will allow the educational world to fly farther and faster than ever before—if we will allow it.”

- Jenny Arledge¹

When telegram was invented, the significance of pigeon-courier started to decline. Similarly when television arrived in communication expedition, radio went the back stage. History of communication exhibits that whenever any new medium comes into the picture, it affects the communication patterns of society.

¹<<http://edtechreview.in/news/2112-technology-in-education-quotes> > as visited on 10th June 2016 at 9:54 IST.

New Technologies have transformed the way we communicate and the way we live and work. ICT in Education is an approach to bring the educational institution and the society closer. The Information and Communication Technologies (ICT) have become inevitable part of our life and plays a crucial role in education. Methods of Schooling and teaching are transforming with this new context. The XXI century education system should focus on contributing positively to the development of a better society and more critical citizens.

The society in which we live requires more flexible ways of learning. Formal, on- formal, informal and invisible learning are living today in the education system and in a virtual space through the network. It is very important to know that ICT are not only about computers and the internet, but also about a large amount of different tools such as mobile phone, tablets, smart phones etc.

ICT IN EDUCATION: THE PRESSING NEED OF THE HOUR

As the 21st century begins, most of the problems confronting humanity in the last centuries have not been resolved and the problem of serving the educational needs of children and adults in different parts of the world is one of them. Education is among the highest priority human needs for a number of reasons, including the economic growth, and the promotion of sustainable development.

Though the government and the private institutions are responding in fulfilling the educational needs, it is the increase in no. of children especially in developing countries that makes it difficult for them. Moreover, the knowledge and skill required to work now have changed due to regular technological developments and globalization. So, to bridge this gap a continuing education for the students who have not completed their education for some reasons an adult education programs should initiated in order to contribute not only the individual development but societal development too.

To effectively harness the power of the new information and communication technologies (ICTs) to improve learning, the following essential conditions must be met²:

- Students and teachers must have sufficient access to digital technologies and the Internet in their classrooms, schools, and teacher education institutions.
- High quality, meaningful, and culturally responsive digital content must be available for teachers and learners.
- Teachers must have the knowledge and skills to use the new digital tools and resources to help all students achieve high academic standards.

Teacher education institutions are faced with the challenge of preparing a new generation of teachers to effectively use the new learning tools in their teaching practices. For many teacher education programmes, this daunting task requires the acquisition of new resources, expertise and careful planning.

In approaching this task it is essential to understand the following:

- the impact of technology on global society and the implications for education

²UNESCO, “Information and Communication Technologies in Teacher Education” [2002] a planning guide, 10.

- the extensive knowledge that has been generated about how people learn and what this means for creating more effective and engaging student-centered learning environments
- the stages of teacher development and the levels of adoption of ICTs by teachers
- the critical importance of context, culture, leadership and vision, life-long learning, and the change process in planning for the integration of technology into teacher education
- the ICT competencies required of teachers related to content, pedagogy, technical issues, social issues, collaboration, and networking
- the importance of developing standards to guide implementation of ICTs in teacher education
- the essential conditions for successful integration of ICTs into teacher education
- Important strategies to consider in planning for the infusion of ICTs in teacher education and managing the change process.

COMMUNICATION AND DEVELOPMENT: THE ADVENT ON MODERN TIMES

Development communication refers to the use of communication to facilitate social development.³ Development communication engages stakeholders and policy makers, establishes conducive environments, assesses risks and opportunities and promotes information exchanges to bring about positive social change via sustainable development.⁴ Development communication techniques include information dissemination and education, behavior change, social marketing, social mobilization, media advocacy, communication for social change and community participation.

Development communication is intended to build consensus and facilitate knowledge sharing to achieve positive change in development initiatives. It disseminates information and employs empirical research, two-way communication and dialogue among people. It is a management tool to help assess socio-political risks and opportunities. By using communication to bridge differences and take action towards change, development communication can lead to successful and sustainable results.⁵

Development communication is a response to historic, social and economic factors that limit access to information and citizen participation. These include poverty and unemployment, limited access to basic services, remote settlement patterns, lack of access to technology, lack of information, inadequate health services, lack of education and skills and lack of infrastructure.⁶

The Food and Agriculture Organization (FAO) asserted that communication can play a decisive role in promoting human development. Democracy, decentralization and the market economy empower individuals and communities to

³Nora C Quebral, "What Do We Mean by 'Development Communication'?" [1972–1973] *International Development Review* 15(2): 25–28.

⁴Paolo Mefalopulos, "Development Communication Sourcebook: Broadening the Boundaries of Communication" [2008] Washington DC: International Bank for Reconstruction and Development/the World Bank, ISBN 978-0-8213-7522-8; 224.

⁵Ibid.

⁶Thusong Service Centre, "The Government Development Communication Initiative: A Response to Democratic Communication and Citizen Participation in South Africa" as retrieved on 11th June, 2016 at 8:02IST.

control their own destinies. Stimulating awareness, participation, and capabilities is vital. Policies must encourage effective planning and implementation of communication programs.⁷

Lee advocated that communication policies and practices require joint action among leaders in social, economic, scientific, and educational and foreign affairs and that success requires constant contact and consultation with communicators and citizens.⁸

UNESCO conducted studies on communication policies as part of the resolutions adopted by the General Conference of UNESCO during its 16th session in 1970.⁹ Its objective was to promote awareness of communication policies at the governmental, institutional and professional levels of selected member states.¹⁰ The selected countries were Ireland, Sweden, Hungary, Yugoslavia, West Germany, and Brazil. Two years later, a UNESCO meeting of experts on communication policies and planning defined communication policy as a set of norms established to guide the behaviour of communication media.¹¹

Hence, by all these steps of communication development will help India to progress on its education front. As there are still many children living in villages, where they have no means of education or those who have to migrate to cities, there ITC would work for their betterment. As, this technology would help these children to study, through the networking technology. This technology would be in their colloquial language, which would help them to understand better and is at very affordable price for the poor. Moreover, its technology also makes study interesting through animation, activities, projects, etc. it also helps the school left out or adult to cope up with the study which they have missed. Furthermore, the most advantageous thing is that the course could be studied at any part of the day. So, through this technology studying is made easy, interesting, flexible studying hours, cheap. The new plans are implemented by our present Prime Minister, Narendra Modi, is of DIGITAL INDIA. Through this technological development in communication, mass media, etc. our dream of having 100% literacy in India can be accomplished. It will help to alleviate the status, remove the social evils like corruption. Then only India can achieve great heights.

For this reason, the changing role of teachers is an essential issue. There is a need to move from a “push educator” to a “pull educator”. The first one fills the heads of their students with content without causing any activity or desire in them in order to deepen the knowledge and the potential of the resources around them. The second one awakes in students the motivation to learn and will help them in the sought of meaningful information that generates knowledge.

A good starting point, according to Anderson and Van Weert (2002)¹², is to join with fellow enthusiasts at the school, to meet together informally to talk about ICT issues and share knowledge.

⁷Food and Agriculture Organization, “Communication: A key to human development” as retrieved on 13th June, 2016 at 7:45 IST.

⁸John Lee, “Towards Realistic Communication Policies: Recent Trends and Ideas Compiled and Analyzed. Paris: The UNESCO Press” [1976].

⁹UNESDOC, “Records of the General Conference, 16th Session. Resolutions adopted by the Conference and the list of officers of the Commissions and Committees” (PDF) [(12 October to 14 November 1970), UNESCO Database Paris, France: UNESCO as retrieved on 8th June, 2016 at 6:38 IST.

¹⁰John Lee, “Towards Realistic Communication Policies: Recent Trends and ideas compiled and analyzed” (PDF) [1976], UNESDOC Database Paris, France: UNESCO; as retrieved on 9th June, 2016 at 15:55 IST.

¹¹. “Meeting of Experts on Communication Policies and Planning” Working Paper. UNESDOC Database Paris, France: UNESCO; [7-28 July 1972] COM-72/CONF.8/3 (PDF) as retrieved on 10th June 2016 at 16:06 IST.

¹² ICT trends in education (pdf); 429, <eujournal.org/index.php/esj/article/viewFile/1355/1364> as retrieved on 10th June, 2016 at 20:05 IST.

This process where two or more teaching colleagues work together to discuss problems, share experiences and provide support for one another with a view to improving their teaching is often called peer coaching. According to Graham (2006)¹³, a good use of online learning stimulates active learning in the classroom, which motivates students to continue learning activities beyond the lecture hall or classroom. Such online learning, then, in combination with sound face-to-face teaching (blended learning) is a powerful approach to learning. Both students and professors can take advantage of these ways of learning and communication.

MAIN CHARACTERISTICS OF ICT

Laudon and Laudon (2010)¹⁴ state that the most important drive globalization has been the explosion in Information and Communication Technologies (ICT) Sectors. For these authors the main ICT's characteristic are:

- *Mobile Learning*. New advances in hardware and software are making mobile “smart phones” indispensable tools.
- *Cloud computing*. The implications of this trend for education systems are huge; they will make cheaper information appliances available which do not require the processing power or size of the PC.
- *One-to-One computing*. The trend in classrooms around the world is to provide an
- Information appliance to every learner and create learning environments that assume universal access to the technology.
- *Ubiquitous learning*. School systems around the world are developing the ability to provide learning opportunities to students “anytime, anywhere”.
- *Gaming*. The phenomenal success of games with a focus on active participation, built in incentives and interaction suggests that current educational methods are not falling short and that educational games could more effectively attract the interest and attention of learners.
- *Personalized learning*. Education systems are increasingly investigating the use of technology to better understand a student's knowledge base from prior learning and to tailor teaching to both address learning gaps as well as learning styles.
- *Redefinition of learning spaces*. Schools around the world are re-thinking the most appropriate learning environments to foster collaborative, cross-disciplinary, students centered learning.
- *Teacher-generated open content*. OECD school systems are increasingly empowering teachers and networks of teachers to both identify and create the learning resources that they find most effective in the classroom. Many online texts allow teachers to edit, add to, or otherwise customize material for their own purposes, so that their students receive a tailored copy that exactly suits the style and pace of the course.
- *Smart portfolio assessment*. The collection, management, sorting, and retrieving of data related to learning will help teachers to better understand learning gaps and customize content and pedagogical approaches.

¹³Ibid.

¹⁴ Supra Note 14.

- *Teacher managers/mentors.* The role of the teacher in the classroom is being transformed from that of the font of knowledge to an instructional manager helping to guide students through individualized learning pathways.

MODERNIZATION AND ITS CHALLENGES

The main motive of modernization is to develop the attitudes and behaviors of people in order to adapt in the modern society. One of the key features of modernization as an objective in advancement is to promote change in attitudes and behaviors that will be more consistent with the persons in a modern society. These changes consists the dealing of persons as individuals rather than as members of groups, the use of technical knowledge, and more geographical and social mobility based on education and merit.¹⁵

Modernization approaches to communication and development were characterized by the use of mass media promotions, enhanced by local opinion leaders, to promote attitudinal and behavioral change. The problem of “underdevelopment” was thought to be one of attitudes and behavior tied to traditional ways of understanding things and doing things. Even traditions which are more favorable to sustainable living patterns are questionable.

In a **case study of Japan**, *Yasuko Minoura sheds light on another social consequence of mobile communication: “The mobile phone has blurred the distinction between ‘at home’ and ‘not at home’, and parents seem to be under the comforting illusion that their children, who are still connected via the mobile, are always ‘at home’.”*¹⁶ Minoura believes that this development threatens to render the relationships between parents and children entirely placeless and to demolish the familial social bonds that are continually constructed in the joys and sorrows, quarrels and happy moments experienced in face-to-face interaction.

In developed countries, children and young people tend to become involved in various leisure pastimes. In many cases, this has generated active groups of children and teenagers who are versatile in their use of the new ICT but also engage in sports and culture-related activities. What has also emerged, however, is a group of passive young people whose everyday lives are filled with television viewing, which, incidentally, is now considered one of the central factors in diminishing social capital and solidarity between people.¹⁷ Extending this idea further, the claim has been made that, in developed countries, public spaces are disappearing and life in general is undergoing a process of privatization,¹⁸ leading to the erosion of social cohesion and trust.

An examination of the power relations at work in commercial media opens up another global dimension of ICT use by children and teenagers. The content of the media culture targeted at children and young people is decided by a small

¹⁵UNESCO – EOLSS Sample Chapters Education For Sustainability, Stephen D. McDowell, “Education For Sustainability – Mass Media and Information Technology in Education” [2015], E6-61-05-08.pdf <<http://www.google.com/url?q=http%3A%2F%2Fwww.eolss.net%2FEolss-sampleAllChapter.aspx&sa=D&sntz=1&usg=AFQjCNHTZ4UhlYmcqI3G7As7GyYFgLasYA>> as retrieved on 14th June, 2016 at 5:57 IST.

¹⁶ Y. Minoura, “Children and Media”, (in the Bright and Dark Sides of the Information Revolution: A Cultural Ecological Perspective, N. Kobayashi, ed. (Tokyo, Hoso-Bunka Foundation, 2001)), 91.

¹⁷ R. Putnam, “Bowling Alone: The Collapse and Revival of American Community” [2000] New York, Simon & Schuster.

¹⁸*Ibid*; and H. Giroux, “Public Places, Private Lives: Beyond the Culture of Cynicism” [2001] Lanham, Rowman and Littlefield.

number of global ICT and entertainment companies that dominate the culture industry. Although, the issue is kept relatively quiet, the ICT market is revolving increasingly around children and young people. There are three main reasons for this: young people and children have more uncontrolled access to these media; they are exposed to ICT and are absorbing and acting upon new information at an ever-earlier stage in their development; and youth are becoming an increasingly important group of consumers who have their own money and can influence their parents' purchasing decisions.

The main producers of television shows for children and young people distribute their programmes worldwide; consequently, the world of children and teenagers is filling up with programmes produced for commercial gain by a handful of companies, and programmes produced locally with the support of public funding are becoming increasingly rare. The result has been an accelerating stereotyping and simplification of the global culture. This type of development can hardly be seen as desirable if, instead of uniformity, the objective is to enhance plurality within children's and young people's media culture.

The centralization of television programming targeted at children and young people represents a good example of how the existence of information and communication technologies by themselves means nothing, and how the technological possibilities contained in them are not necessarily developed or put to use unless money can be made from them. The media culture of children and young people appears to constitute a microcosm of the more general homogenization of values occurring in the global media culture.

Access to increased opportunity for interactivity through digital technology does not seem to be altering the technology-related wishes or use patterns of children and young people; from the beginning, games have been the true "killer" applications, first on television and computer screens and later in game consoles.

Some of the deficiencies noted in the document are enumerated as follows.¹⁹

First, the policy has no specific special application to education. While there are sector applications for health, agriculture, art, culture, tourism; and governance, education is subsumed under human resource development. Second, the objectives and strategies related to education as reflected in the sector application for human resource development are market driven. Students are only being prepared to acquire knowledge and skills for future jobs. Third, teachers are indispensable for successful learning about ICT, and learning and teaching through ICT.

ROLE OF TELECOMMUNICATION IN EDUCATION

"EDUCATION FOR ALL" is the main goal that can be attained through technology. Opportunities of learning are provided to children, women and men over the Internet, computer system and CDROMs, electronic-mail, audio and video teleconferencing, video or T.V broadcasts and radio. Students and other learners can easily access the content. Teachers can also improve or upgrade their skills and knowledge, especially the skills which are required in order to assist their students in learning and to find the particular content and syllabus they require. Telecoms can upgrade both subject coverage and delivery and increases the access to education in even the most remote areas. The continuous skills training outside the formal sector, for the literacy and numeracy and for training in the workplace are also required. Here, telecoms

¹⁹ International Education Journal, 2005, 6(3), 316-321. ISSN 1443-1475 [2005] Shannon Research Press, <<http://iej.cjb.net>> as retrieved on 10th June, 2016 at 15:45 IST.

can aid deliver quality content across a wide geographical extent. Educating and training citizens is one of the major obligations of governments. Education has always been a basis for economic and social development and it will be important for the knowledge economies of the 21st century. Countries have the chance to develop their intellectual capital, and it will necessary for all countries to invest rationally to educate and giving training to their citizens, of all ages.

Investments in education and learning are necessary. Smart investments that harness the power and reach of the ICT available can facilitate in achieving the goal of universal access to education. The investment methods have changed, as have the economics of education and distance learning. Just as the cost of computation falls exponentially, so does the cost of communicating across the world-wide network, as the quantity of digital information compute and moves through higher capacity networks. Information can now reached to all parts of the world, across a city or nation, in basically the same time and cost. Infrastructure investments will now focus into ICT rather than into bricks and mortar, and it is necessary for policy makers and educational planners to be conscious of the technologies that are available. They must be capable to choose the affordable technologies to meet the needs of the country and its education system.

UTILITY OF TELECOMMUNICATION

Radio and broadcast television have been used for years to extend the scope and conveyance of education to many who desire to learn, particularly those in rural areas, while print has been the source of distance education in correspondence courses. These one-way technologies can now be pooled with two-way, interactive, multimedia systems that bring to learners, on demand, voice, video and data in text and graphics. These computer and network-based systems bring main differences in both the application and the cost of technologies available for education. “The complication and cost of these technologies should not discourage innovative research that must precede large-scale use in educational settings,” says a recent World Bank paper on Latin America and the Caribbean.²⁰ “With vigilant planning, and given the continuous reduction in costs, these technologies may offer the significant opportunity for improving education accessible in many decades. Furthermore, technologies at all educational levels can be functional even under current budget limitations if deliberately developed and carefully planned.” The challenge is to prudently integrate investment in technology with the national objectives and strategies for education. “One of the greatest opportunities is that technology may ultimately provide higher quality education to considerably more of the population.” To work towards this vision, what educators such as Dr. Jon Peha of Carnegie-Mellon University in the United States propose is that programmes use a variety of technologies and services to help achieve a variety of functions in the learning process. He identifies the following categories of tools for delivering education.²¹

Telecommunication Tools for Education²²

One-Way Communication, Non-Interactive

- Broadcast radio: All India Radio broadcasts impart farmer education and teacher training. In Nepal and South Africa, their governments have practical training programmes for kindergarten teachers.
- Broadcast television: The British Open University higher education on TV is a model for mega-universities in

²⁰Telecommunication and Education, <regency.org/t_in_act/pdf/English/educate.pdf> as retrieved on 13th June, 2016 at 6:59 IST.

²¹Ibid.

²²“The Telecommunications Industry”, <<http://www.nap.edu/read/11711/chapter/3>> as retrieved on 9th June, 2016 at 13:06 IST.

the developing world; China's TV academy guide science teachers; Thailand's Open University School of Education proposes working certificates and degree programmes;

- Satellite television: South Africa, Brazil and Zimbabwe's new satellite broadcasts to 3,000 higher educational sites; Galaxy Latin America's free admission to two of 200 direct television satellite channels for teacher education;
- Satellite radio: The planned World Space digital audio transmission that will cover whole continents, providing audio and information;
- Video and audio tape: In Brazil's in-service programme for primary school teachers of mathematics and Portuguese; the USAID (United States Agency for International Development) rural health education programme; and Open University courses in the United Kingdom that use tape cassettes.
- the World Wide Web (the Web);
- CD-ROMs with multimedia courses which imparts training;
- Read-only information sources, e.g. on-line journal archives.

Two-Way Communication, Interactive

- Video conferencing in various arrangement with two-way video or audio return path, such as the multisite video broadcast and two-way audio from the United States Information Agency's WorldNet service; desktop or conference room compressed video for two-way or multisite video conferencing;
- NetMeeting over the Internet or an ISDN (integrated services digital network) line which can handle a lot of data very quickly;
- Audio conferencing by telephone conference calls with high-quality audio conferencing equipment or speakerphones and service provided by national and international carriers, used for discussion seminars, lectures with keypad response, support sessions for teachers;
- E-mails
- Widely shared information resources, e.g. shared databases.

CONTRIBUTION OF ICT TO THE CULTURAL PHENOMENA

Now-a-days people are encountered with a worldwide media culture that represents a unifying force, a type of cultural tutoring that teaches them how to consume and act "and what to think, feel, believe, fear, and desire".²³ Youths around the world are dreaming about living a luxurious life of a businessman or a top athlete or pop star. The global media culture, saturated with standard culture, is bumping against the youth like a pressure wave. The compulsion towards amalgamation effected by the media culture varies from one society to another and depends on a young person's media skill and his or her power to struggle outside influences. Culture saturated by ICT creates a setting in which the traditional

²³ D. Kellner, "Media Culture: Cultural Studies, Identity and Politics between the Modern and the Postmodern" [1995] New York and London, Routledge, pt xiii.

ways of socialization are changed and, at least to an extent, substituted with new ones. In today's world of umpired popular culture, Information Communication Technology constitutes a socialization force potentially more influential than the home or school.

Jennifer Light states, "Technology is not a neutral tool with universal effects, but rather a medium with consequences that are significantly shaped by the historical, social, and cultural context of its use."²⁴ This means that ICT should always be observed contextually or socio-historically in this situation, as part of the alterations that have occurred in the living environment of young people.

Margaret Mead's three-way division of culture based on post figurative, co figurative and pre figurative socialization patterns provides an interesting opportunity for this kind of examination.²⁵ It is worth noting here that studies of cultural forms offer typifications and a general picture of the occurrence, hiding from view the particular activities and practical everyday particulars of the culture. In addition, it must be made clear that the three traditional forms explored below do not signify a clear temporal continuum but can exist and prevail concurrently in different parts of the world, as is the case at present.

In a post figurative culture, socialization ensues as knowledge and customs that are passed down from the older to the younger generation. In a co figurative culture, people also learn from peers and organize a versatile formal education. In a pre -figurative culture, the trend of socialization changes so that the younger generation may inculcate the older generation on how to do job in a new cultural state. The sheer pace of cultural change is a significant reason for this reversal. In a new cultural setting, old talents, acquaintance and attitudes lose their meaning. Naturally, the transformation is never complete; even in a society thoroughly saturated by Information Communication Technology, post figurative and co figurative cultures remain to live on through traditions and customs nurtured by people.

The speeding of cultural change functions as the basis for two-way socialization, making it probable for adults not only to teach but to learn from youngsters and teenagers, and for children to teach each other and their parents and to learn from one another. Popular stories and chronicles become part of the experiences of childhood and youth, while at the same time children and youth become part of the narratives of popular culture.

This type of cultural change is one reason for the cultural practices and meanings generated by children and youngsters which need to take note to, read, explored and studied with precise understanding. As part of the living environment of children and teenagers, ICT create public spaces in which new connections are formed between knowledge, skills and pleasure.²⁶

INFLUENCE OF MEDIA CULTURE

Henry Giroux puts it²⁷:

"With the rise of new media technologies and the global reach of the highly concentrated culture industries, the scope and impact of the educational force of culture in shaping and refiguring all aspects of daily life appear

²⁴ J. Light, "Rethinking the Digital Divide", [2001] (Harvard Educational Review, vol 71, No. 4, 711).

²⁵ M. Mead, "Ikäryhmien Ristiriidat: Sukupolvikuilun Tutkimusta [Culture and Commitment: A Study of the Generation Gap]" (Helsinki, Otava, 1971).

²⁶ H. Giroux, "Impure Acts: The Practical Politics of Cultural Studies" (New York and London, Routledge, 2000), 30.

²⁷ H. Giroux, "Impure Acts: The Practical Politics of Cultural Studies" [2000] New York and London, Routledge, 32.

unprecedented. Yet the current debates have generally ignored the powerful pedagogical influence of popular culture, along with the implications it has for shaping curricula, questioning notions of high-status knowledge, and redefining the relationship between the culture of schooling and the cultures of everyday life.”

Under the present circumstances, there are few places left in the world where one might escape the messages and meanings rooted in the televised media culture.

Most of the ways in which we make meanings, most of our communications to other people, are not directly human and expressive, but interactions in one way or another worked through commodities and commodity relations: TV, radio, film, magazines, music, commercial dance, style, fashion, and commercial leisure venues. These are major realignments.”²⁸

In the world of young people, the media culture may be characterized primarily in terms of three distinct considerations. First, it is produced and reproduced by diverse ICT sources. It is therefore imperative to replace the teaching of knowledge and skills central to agrarian and industrial societies with education in digital literacy. A similar point is made by Douglas Kellner, who contends that in a media culture it is important to learn multiple ways of interacting with social reality.²⁹ Children and young people must be provided with opportunities to acquire skills in multiple illiteracies to enable them to develop their identities, social relationships and communities, whether material, virtual, or a combination of the two.

Second, the media culture of youth extends beyond signs and symbols, manifesting itself in young people’s physical appearance and movements. The media culture influence is visible in how youth present themselves to the world through means made available by prevailing fashions; the body is a sign that can be used effectively to produce a cultural identity. Furthermore, various kinds of media-transmitted skills and knowledge are stored and translated into movements of the body. This is evident in a number of youth subcultures involving certain popular sports, games and music/dances such as street basketball, skateboarding and hip hop.

The body is highly susceptible to different contextual forms of control. While they are in school, pupils’ movements are regulated by certain control mechanisms and cognitive knowledge. In the streets, youth clubs and private spaces, however, their bodies function according to a different logic. Informal knowledge absorbed through the media culture requires some conscious memorizing but also involves physical learning, quite often commercialized.³⁰

APARADIGM SHIFT FROM TEACHING TO LEARNING³¹

As technology has created change in all aspects of society, it is also changing our expectations of what students must learn in order to function in the new world economy. Students will have to learn to navigate through large amounts of information, to analyze and make decisions, and to master new knowledge domains in an increasingly technological

²⁸ P. Willis, “The Ethnographic Imagination” [2000] Cambridge, Polity Press, 48.

²⁹ D. Kellner, “Multiple Literacy and Critical Pedagogy in A Multicultural Society”, [1998] Educational Theory, vol. 48, No. 1, 122.

³⁰ H. Giroux and P. McLaren, “Kriittinen pedagogiikka [Critical Pedagogy]” [2001] Tampere, Finland, Vastapaino, 53 and 219-230.

³¹ UNESCO, “Information and Communication Technologies in Teacher Education”, [2002] a planning guide.

society. They will need to be lifelong learners, collaborating with others in accomplishing complex tasks, and effectively using different systems for representing and communicating knowledge to others. A shift from teacher-centered instruction to learner-centered instruction is needed to enable students to acquire the new 21st century knowledge and skills.

Shifting the emphasis from teaching to learning can create a more interactive and engaging Learning environment for teachers and learners. This new environment also involves a change in the roles of both teachers and students. The role of the teacher will change from knowledge transmitter to that of learning facilitator, knowledge guide, knowledge navigator and co-learner with the student. Earlier teacher controls and directs all aspects of learning and now they give students more options and responsibilities for their own learning. The new role does not diminish the importance of the teacher but requires new knowledge and skills. Students will have greater responsibility for their own learning in this environment as they seek out, find, synthesize, and share their knowledge with others. There is a shift from Passive recipient of information to Active participant in the learning process Reproducing knowledge to Producing and sharing knowledge, participating at times as expert, Learning as a solitary activity to Learning collaboratively with others.

ICTs provide powerful tools to support the shift to student-centered learning and the new roles of teachers and students.

ELECTRONIC MEDIA AND DISTANCE EDUCATION

The need of distance study, open study, studying at home or correspondence study is to complete the qualification and training by staying at our home. It is the mode of study where the students are not actually present in the school. The ICT would be helpful in this field in many ways in this field. ICT acts as an I-tutor for studying, as now it has become a formalized teaching and learning system specially designed to be carried out with the help of electronic communication. Through this we can pretty much do any type of course from school study to getting any type of bachelor's degrees or any specialist training courses. It helps us to remove all barrier to learning and it requires no prior qualifications to study, and for the students who have disabilities, this is the determined effort has been taken to overcome the disability.

Moreover, it increases the admittance to learning opportunities. Learning is now interesting as it can be done through different techniques and styles. Distance learning helps the learners who are not likely to be present at traditional classroom instruction (*effectiveness*). It serves by educating many or more learners per dollar spent (*efficiency*) and it attracts and serves lower level learners (*equity*). Even the adults are also educated by this who cannot attend the classrooms due to many reasons like:

- Family and work commitments
- No efficient transportation
- Living in place where there is no access to schools

CONTRIBUTIONS OF ELECTRONIC MEDIA TO EDUCATION

Firstly, it will help in achieving **flexibility**; it is helpful as we would be able to manage both study and job together. Unlike, the traditional and rigid schedule of the class, the I-tutor helps us to study at our own convenience. Secondly, another benefit is **living anywhere**; even if we are living in any part of the world, if we have access to internet or postal services, then also we can study. Thirdly, **cost** is also an important factor. In distance education, the cost of the study is very less. We don't need to pay the university or school the monthly fees. Moreover, we don't need to pay for the

transportation charges, uniforms, and other money that is spent while going to school. Fourthly, it helps in **accreditation**. Apart from our regular study, we have a chance to study other nationally recognized courses through ICT. It helps us to broaden our knowledge and helps us to boost our career prospects. Fifthly, through this modern technology of ICT, we are able to interact with other **classmates**, who are also pursuing the same course, as the I-tutor connects us with them automatically. We can talk and discuss the subject matter with them which makes the learning interesting. Sixthly, it is **networking**, the students with the help of ICT is able to interact the wide network of people. Instead of being limited to networking in the local area, ICT enables us to make connections with more diverse range of people of different background, nationality, religion, caste, creed from which we can get to know a lot of things, our thinking broadens, develops confidence, etc. Seventhly, it helps us to **select professors**. It helps us to choose the professor from whose lectures we can understand better. Then, it also gives us the chance to attend the lectures of prestigious professors or guest lecturers in each field. Eighthly, it helps in **self-motivation**, as a student we need to learn how to be self motivated by ourselves. It is an important aspect of growth. Ninthly, it is **freedom and adaptability**; it is an individualized approach to study, which helps us to develop the connection between us and the course material, by inculcating the habit of reading by ourselves. It helps us to choose our own way to the learning process. Ninthly, it saves **time**. We don't need to waste time in going anywhere in order to get knowledge.

CHALLENGES FOR MEDIA USE IN OPEN AND DISTANCE EDUCATION

Furthermore, there are also certain disadvantages of the distance education:

Firstly, it is **discipline**. When we are opting for this type of course, then we need to be self-determine in order to complete the assignments and complete all the deadlines. We need to form our own time table and stick to it. As in this, no one would be putting pressure to complete the assignments and to study regularly. Since, studying is a regular process. If one thinks that on Sunday we will study the entire lessons of a week. Then, it is not possible. By this, we won't be able to grasp much. So, studying require a strict routine to study every day. Secondly, there is **absence of teacher/ instructor**. Due to absence of teacher, the students lacking the ability to study independently will not be able to cope up with the studies. They require guidance of teacher. Moreover, teacher helps the student in many ways like teaching them in a way which they are capable to understand, motivate, inspire, and guide them etc. This cannot be done by the I-tutor. The greatest weapon of the teacher is the unlimited knowledge of theirs and the experience they gain. Through them, the teachers mold the students in a way by which the personality of student is developed and excel in every field. Thirdly, for learning a proper environment has to be developed. But through this I-tutor, there is **absence of a proper learning environment**. The I-tutor is not able to cultivate a proper class room environment or ambience of the campus which add strength to learning process. Fourthly, there is **lack of motivation**. In I-tutor, we have to motivate ourselves, as there won't be anyone to coax and cajole us to realize our targets. It is also a factor to get deviated from our goal. Fifthly, **lack of knowledge and skill of latest technology**. The persons who don't have any knowledge about the latest technology on how to use laptops, smart phones, tablets, etc. then it would be difficult for them to operate it.

THEORIES SUPPORTING THE NEW VIEW OF THE LEARNING PROCESS³²

The new views of the learning process and the shift to student-centered learning have emerged based on cognitive learning research and the confluence of several theories that have informed our understanding of the nature and context of learning. Some of the most prominent theories include: socio-cultural theory (based on Vygotsky's inter subjectiveness and Zone of Proximal Development), constructivism theory, self-regulated learning, situated cognition, cognitive apprenticeship, problem-based learning (Cognition and Technology Group at Vanderbilt), cognitive flexibility theory (Spiro et al, 1988), and distributed cognition (Salomon et al, 1993). Each of these theories is based on the same underlying assumptions that learners are active agents, purposefully seeking and constructing knowledge within a meaningful context.

Vygotsky's Socio-Cultural Theory³³

Vygotsky's socio-cultural theory of human learning describes learning as a social process and the origination of human intelligence in society or culture. The major theme of Vygotsky's theoretical framework is that social interaction plays a fundamental role in the development of cognition. Vygotsky believed everything is learned on two levels. First, through interaction with others, and then integrated into the individual's mental structure. A second aspect of Vygotsky's theory is the idea that the potential for cognitive development is limited to a "zone of proximal development" (ZPD). This "zone" is the area of exploration for which the student is cognitively prepared, but requires help and social interaction to fully develop. A teacher or more experienced peer is able to provide the learner with "scaffolding" to support the student's evolving understanding of knowledge domains or development of complex skills. Collaborative learning, discourse, modeling, and scaffolding are strategies for supporting the intellectual knowledge and skills of learners and facilitating intentional learning. The implications of Vygotsky theory are that learners should be provided with socially rich environments in which to explore knowledge domains with their fellow students, teachers and outside experts. ICTs can be used to support the learning environment by providing tools for discourse, discussions, collaborative writing, and problem-solving, and by providing online support systems to scaffold students' evolving understanding and cognitive growth.

Jean Piaget³⁴

Based on his research on the development of children's cognitive functions, Piaget's work is regarded by many as the founding principles of constructivist theory. He observed that learning occurs through adaptation to interactions with the environment. Disequilibrium (mental conflict which demands resolution) gives rise to Assimilation of a new experience, which is added to the existing knowledge of the learner, or to Accommodation, which is modification of existing understanding to provide for the new experience. Specifically, Piaget posited that the existing cognitive structures of the learner determine how new information is perceived and processed. If the new information makes sense to the existing mental structure of the learner, then the new information item is incorporated into the structure (i.e., Assimilation). If, however, the data are very different from the existing mental structure of the learner, they are either rejected or transformed in ways so that it fits into the structure (i.e., Accommodation). The learner has an active role in constructing his or her own knowledge in both of these ideas. He observed that, as children assimilated new information into their

³² UNESCO, "Information and Communication Technology in Teacher education", a planning guide (2002), ED/HED/TED/3<<https://www.google.co.in/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#>> as assessed on 10th June at 5:30 IST, 23.

³³Ibid, pg 25.

³⁴Ibid, pg 26.

existing mental structures, their ideas gained complexity and power, and their understanding of the world grew in richness and depth. These ideas are core concepts of the constructivism view of the learning process.

Jerome Bruner³⁵

Similar to Piaget, Bruner emphasized that learning is an active process in which learners construct new ideas or concepts based upon their prior knowledge and experience. He identified three principles to guide the development of instruction. These include: (1) instruction must be concerned with the experiences and contexts that make the student willing and able to learn (readiness); (2) instruction must be structured so that the student can easily grasp it (spiral organization); and, (3) instruction should be designed to facilitate extrapolation and or fill in the gaps (going beyond the information given).

Problem-Based Learning³⁶

The goals of problem-based learning (PBL) are to develop higher order thinking skills by providing students with authentic and complex problems and cases. This approach to learning provides a more authentic context for learning and engages students in authentic tasks. It is used frequently in fields such as engineering, medicine and architecture, and has been increasingly applied to K-12 settings. Through the process of working together, articulating theories, creating hypotheses, and critically discussing the ideas of others, students move to deeper levels of understanding of the problem. The self-directed learning strategies developed in PBL may help foster students' lifelong learning.

Anchored Instruction³⁷

Anchored instruction is an approach to designing instruction that is 'anchored' in a real world context, problem or situation. Technology has been used to help create 'real world' contexts and situations through the use of video. The video segments provide the context for the subsequent learning and instruction.

DISTRIBUTED COGNITION³⁸

Distributed cognition emphasizes that cognitive growth is fostered through interaction with others and involves dialogue and discourse, making private knowledge public and developing shared understandings. Tools for online collaboration have been designed to support collaborative knowledge construction and sharing in the classroom.

COGNITIVE FLEXIBILITY THEORY³⁹

This theory asserts that people acquire knowledge in ill-structured domains by constructing multiple representations and linkages among knowledge units. It also notes that learners revisit the same concepts and principles in a variety of contexts. The theory is useful in understanding how knowledge is transferred in ill-structured knowledge domains. (Spiro et al., 1988)

³⁵Ibid, pg 27.

³⁶Ibid, pg 27.

³⁷Ibid, pg 27.

³⁸Ibid, pg 27.

³⁹Ibid, pg 28.

COGNITIVE APPRENTICESHIP⁴⁰

Cognitive apprenticeship is a term for the instructional process in which teachers or more experienced or knowledgeable peers provide ‘scaffolds’ to support learners’ cognitive growth and development. Cognitive apprenticeship permits students to learn through their interactions, construct knowledge, and share knowledge-building experiences with the other members of the learning community. ICTs provide powerful new tools to support cognitive apprenticeships, enabling groups to share online workspaces to collaboratively develop artifacts and intellectual products. They also make possible tele-apprenticeships, in which an expert is able to work with or mentor a student who may be thousands of miles distant.

SITUATED LEARNING⁴¹

Situated learning emphasizes the use of apprenticeship, coaching, collaboration, authentic contexts, tasks, activities and cognitive tools. It occurs when students work on authentic tasks that take place in real-world settings. Learning is viewed as a function of the activity, context and culture in which it occurs, which contrasts with most classroom learning which is abstract and out of context. Situated cognition theory emphasizes providing an authentic context for the learner and encouraging social interaction and collaboration in the learning environment. Through collaborative problem solving, dialogue, and discussion students are able to develop deeper levels of understanding of a problem or knowledge domain.

SELF-REGULATED LEARNING⁴²

Self-regulated learners are those who are aware of their own knowledge and understandings, i.e., what they know and what they do not know or need to understand. It combines self-observation, self-judgment, and self-reaction. Self regulation plays a crucial role in all phases of learning and has the potential to increase the meaningfulness of students’ classroom learning. ICT tools can be used to make students’ tacit knowledge public and to help them develop Met cognitive skills and become more reflective and self-regulated learners. These theories that undergird the new views of the learning process help shape the new pedagogies for learning. Ultimately, the power of ICTs will be determined by the ability of teachers to use the new tools for learning to create rich, new, and engaging learning environments for their students. The UNESCO World Education Report (1998) notes that: There are indications that the new technologies could have radical implications for conventional teaching and learning processes. It notes that, in reconfiguring how teachers and learners gain access to knowledge and information, the new technologies challenge conventional conceptions of both teaching and learning materials, and teaching and learning methods and approaches.

The challenge for ICTs in Teacher Education is to assure that the new generations of teachers, as well as current teachers, are well prepared to use new learning methods, processes and materials with the new ICT tools for learning. The following sections provide a road map to help teacher education institutions meet the challenge.

CONCLUSIONS AND SUGGESTIONS

Information and communication technology is a powerful instrument for increasing the standards of teaching and

⁴⁰Ibid, pg 28.

⁴¹Ibid, pg 28.

⁴²Ibid, pg 29.

learning. It acts as a catalyst for drastic change in existing school practices and a genuine tool for preparing the students for the future. The success in the implementation of an ICT policy is dependent on the recognition of the importance of its sustainable achievement. Make best use of ICT potentials will involve excellent ICT policy, greater participation of private sector and public sector in the funding of the ICT policy implementation, and suitable implementation and check mechanism.

The impacts of Information and communication technologies are seen in all aspects of our life including education. They are encouraging changes in the working conditions, teaching-learning approaches, management and exchanging of information, and so on. ICT has contributed significantly in the field of education. ICTs are making significant differences in the teaching approaches and the methods in which students are learning. ICT has improved learning atmosphere, which facilitates lively, collaborative, creative, integrative, and evaluative learning as a benefit over the traditional method. In other words, Ictus becoming more suitable in the understanding and implementation of the rising pedagogy of constructivism that gives superior responsibility of learning for students.

It can be seen that the education system should adjust to adapt to modern necessities and to integrate new technologies. By incorporating these technological styles into the educational system, a superior quality education can be provided at a cheaper price and is spread over larger part of the population.

Some people criticizes that not all media teachings are worth learning. The messages received through both the traditional and newer media should be critically discussed at the national & local levels and between the members of the family, and the meanings and information carried by them—whether visible or invisible, explicit or implicit—should be analyzed. It is frequently argued that kids and young people are more acquainted than their parents and teachers with the practices of the media culture and are contributing to the introduction of a new media culture independent of formal technique of teaching and studying. Without underrating their capabilities, however, it is sensible to assert that children and youth are not able to deal with their everyday lives solely on their own. They need to be loved, appreciated, supported and understood by adults who will also set them with limits and advice. It does not seem likely that a global predatory media culture can cater to those needs.⁴³

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