

## **Thriving in the Digital Reality of the Cyber World: Towards a New Teaching and Learning Design**

SOUMYA JOSE

Vellore Institute of Technology University, India

The digital literacy and awareness are now not just bound with education. The digital expansion is now a part of social, political, cultural, economic, community, and intellectual life. The education systems at business schools need to help future managers to understand and benefit from their engagement with digital technology and digital cultures. Yet, only a little research has been carried out on the conceptual implications in implementing this shift in curriculum in Indian B Schools. The young minds today are living in a digital reality. The role of various ICT programs in elementary education has helped them to exercise, explore and perform in the digital world. This chapter tries to bring out the importance of various digital world entities in understanding the digital communication better. The implementation of these concepts in our curriculum needs a transformation from formal pedagogic techniques to “cybernetically” distributed informal pedagogies of digital learning. This paper proposes the teaching and learning designs by which the student can understand the digital ecology of communication sphere.

**Keywords:** Data management, digital reality, digital natives, future managers, interactive communication, pedagogical shift

The principles of literacy practices in Indian context have changed over last two decades. The development and diffusion of digital technologies are playing a significant role in shaping and reshaping the literacy. The concept of literacy has changed over the years from the specific ability to read, write and participate in the community of the literate to a set of generic functionalities like ‘the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts’ (LAMP, 2004).”Digital Literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process” (Martin, 2005).

The digital literacy in the Indian management classrooms is reaching its new meaning and agreements. Hitherto, little follow a line of investigation with the realistic and theoretical repercussions for the management communication curriculum. The inefficiency of the curriculum to cope with the requirements of future communication becomes even problematic when political and social concerns ties up with curriculum. The

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Correspondence to: **Dr. Soumya Jose**, School of Social Sciences and Languages, VIT University, Vellore, Tamil Nadu-632 014, India. E-mail: soumya.jose@vit.ac.in

future managers should be able to design and solve problems of technology-rich environments (TREs) which are integral parts of the digital world (Goos, 2013).

If we try to define the digital literacy in historical context, the concept of “text” attains its own status chronologically. The recent pedagogical studies demonstrate that proficiency in digital literacy depends mainly on academic experience rather than technical and how learners organize and integrate the information they find rather than on how much information they peruse (Bulger, et al. 2014). The rhetoric of understanding of literacy connected with text is to communicate with each other in a common language. The visual literacy has become prominent criteria with the emergence of print media. The reading and writing of text were replaced with the visual language. During the late 1970s, information literacy became a tool for sympathetic text which was carried over by media literacy over the decade. The news as the carrier of text could influence the masses and manipulate their understanding and construction of meaning of the text (Altheide& Johnson, 1980; Keen, 1982). Before the advent of the social media and advanced technology, the concept of digital literacy was confined to computer literacy. The computer itself has become an instrument of text which reproduced its status quo by merging with critical literacy. In the context of expanding literacy, the pedagogical research marked digital literacy competencies. According to Hobbs, the ability to access, analyze, create, reflect and take action are the competencies needed for a “digital world” student to achieve the minimum level of digital literacy (2015). To expand the idea of Hobbs and evaluate it with Martin (2005), the ability to access, use and share the digital content; ability to analyze and evaluate; ability to create and collaborate; ability to reflect and reconstruct, and ability to take action are the digital literacy competencies to be achieved by the students in the classrooms in the context of expanding “text” literacy. Hobbs also stresses the change in the role of the teacher to facilitate a shift in the thinking process of the children (2015).

The digital literacy plays a huge role in the management profession in teaching and learning. Ito, et al. view the digital media or life as “commonplace and pervasive, having been taken up by a wide range of individuals and institutions in all walks of life” (2008). The understanding of digital self and digital community standards are needed as part of the social, political, cultural, economic, community and intellectual life. The transformed meaning of text literacy to digital literacy; from perceiving to participation makes the literate learner “respond to certain changes in our (digital) media ecology that have important implications for learning” (Ito, et al. 2008). The need of “participation” (as emphasized by Jenkins, 2009) calls for more value in which it draws attention to situated learning theory. Albeit, the studies stress on media education and literacy, understanding of communication management through emerging power shifts in media will enhance awareness and needs for management studies.

The future managers who are pursuing their management courses in India now need to get trained in communication management. The status of communication management in Indian management curriculum is confined to the realm of traditional way of communication. The need to turn towards digital media and networks in communication management is the key position before facing the digital future. The managers in today’s classroom need to be able to administer and handle “digital kids” who as noted by Hsi as “the next generation citizen who learn and experience everyday life through digital media” (2007). Concisely, the curriculum and associated classroom practices should be able to address the need of present and future digital reality. Within the context of digital society, it is the digital literacy that makes the management students and managers fit for “living, learning and working in a digital society” (Little John in *Learning Literacies in a Digital Age*, 2009).

The quality level of the Indian management curriculum and education system has been a subject of debate for more than a decade. Jagadeesh (2000), puts forward various constraints, and conflicts in providing quality management education in India. He mainly points out the need of critical revision of “regulatory agencies existing in the country to monitor the standards of management education” (2000). The constraints and conflicts have become more complex when the management education system in India commenced to embrace business model and entered into the rat race between the schools to satisfy their “customers (students and recruiters)” (Popli, 2005). The B Schools set standards for “feel special and deals with the customer as a matter of priority rather than as a secondary issue” (Popli, 2005). The actual standard that has been set for the B Schools as noted by Jha and Kumar are “curriculum, business research, quality of research publications, industry - institute interface, management development programs, faculty development programs, placements, compensation packages of B - school graduates, career development trajectory of alumni, diversity among faculty as well as students, governance and accountability” (2012). While most of the B Schools try to influence “external customer of the educational system,” (Sahney, et al. 2008) the set standards in the research and technological areas are overlooked when it comes to curriculum design. This chapter deals with such neglected space in the Indian management education curriculum and learning process. The chapter also endeavours to discuss various Y generation digital intricacies in order to render a better comprehension of the digital communication in the business and professional life of a technomanegerial entrepreneur.

## **Digital Life—Consuming World Reality**

The pragmatic and collective understanding of digital is now completely confined to the internet. The social impact of the internet is a topic of academic debate for more than a decade. The early studies on virtual community and digital life demanded a new paradigm shift which “critically encounter how research can be most meaningfully handled given a terrain in which users are actually embodying themselves digitally, and often in multivalent ways” (Taylor, 1999). The concurrent arguments were mostly related with the “newness of the medium” (Tyler, 2002) and the implication of the internet with the “human interaction” (Putnam, 2000) and “social building” (Calhoun, 1998). One of the early thoughts of internet and communication, as remarked by Hiltz and Turoff states that the internet is “an unparalleled technology that allows people to communicate with one another regardless of time and space” (1978).

The modern philosophers engaged in understanding the digital life, reach a consensus that “internet provides new ways of communication and socializing that fundamentally transform the lifeworld in which we live” (Zhao, 2005; 2006) but complicating within the network (Petrow, 2014) and building a “new interface between mind and world” (Donald, 2014). These realm of thoughts can be easily viewed by within the framework of managerial workspace. The managers and entrepreneurs at different organizations and firms rely on populations and their communication networks. The traditional management areas like human resources, marketing, corporate communication ought to be revised within the framework of digital life.

An understanding of the digital life is inevitable to comprehend the mainstream life in the 21<sup>st</sup> century. A management curriculum that overlooks the communication pattern and needs of world order will result in producing inefficient graduates. The increased number of multi-national cooperate networks and outsourcing firms, provides “ready-made” career choices for students, but the survival outside the box and up gradation remain unanswered.

Apart from digital technologies, “globalization, demographic shifts, and deregulation are other driving factors” (Friga, et al. 2003) that need to be considered by management educators and stakeholders while developing future strategies.

There have been numerous academic disclosures on digital life and its social implication. The Y generation perceives the world reality and order through digitally constituted society. The observations of Palfrey and Gasser explaining the digital natives are significant in understanding the digital world and its structures. “This culture is global in scope and nature. Whether physically based in Rio de Janeiro, Shanghai, Boston, Oslo or Cape Town, Digital Natives - often young elites - form part of a global culture of their peers. They are connected to each other in terms of how they relate to information, how they relate to new technologies, and how they relate to one another. Parallel to their digital universe, Digital Natives are embedded in regional and local customs, habits, and values. These factors, among others - together with the social and economic context and the local laws- are likely to shape the ways in which Digital Natives use digital technology, how they can realize its opportunities, and how they will address the challenges it poses” (2008, p.13).

The observation above gives a comprehensible relation between online community and offline world reality. Hitherto, digital world is not a new word, but its adaptation in syllabus is still not achieved as it is to be. While considering the prototypes for future management curriculum, we have to consider the world reality that influences the digital life. The discourses and dialogues on various research provide a definite agreement that the digital world is a universal phenomenon and it does influence in the profession as well (James, 2012; Mostaghimi&Crotty, 2011; Cain &Romanelli, 2009). The unrealistic and non-conformist planning of curriculum and teaching strategies are the root-cause of infirmities in the teaching methodology. The adaptation of the universal digital world ought to be in conformity with the Indian reality in order to bring in an ideal teaching and learning design for future management classrooms.

There should be an awareness on planning the curriculum for the digital generation, taking into consideration the real world requirements. Identifying the set skills that future managers require is important and the expected skills include the communication within and outside networks, knowledge on interfaces and accessing data management. This is the training and shift in skills that are required for managers to fit as digital organizers (in context of organizations and corporate scenario). Additionally, the curriculum should cover the method of teaching and learning process too.

These methods need to be articulated among the educators and also correlate the needs of the industry. The Y generation with basic logic and high level of experience in digital life has to encounter these methods which will be useful for their profession. The recent multinational studies (including Indian researchers) show that most of the companies consider missing digital skills as the hurdle to their Digital Transformation and few of them prefer continuing using the traditional approaches for sourcing digital skills(Spitzer et al, 2013). The organizations will not prefer to train their employees in advanced digital skills since efforts taken will be insufficient to meet the day today advancement in the digital world. Consequently, the duty of identifying the “missing” skill set and providing training comes under the charge of the academics. When the B Schools try to impress students and recruiters alike – it is important to provide what is not planned but what is actually needed. As per the findings from Capgemini Consulting Analysis, the development of digital skills is involved mainly through a cycle of four processes. They are by defining a vision and identifying future skill requirements, undertaking skill gap assessment, evaluating progress constantly and bridging the skill gap (Spitzer et al, 2013).

## Indian Education System

It is believed that in ancient times, India had the “Gurukula” system of education. The Gurukula was a tradition where anyone who wished to study went to a teacher’s (Guru) house and requested to be taught. If the request of the student is accepted by the guru, he would then stay at the guru’s house and help with all activities at home. This mode of education followed the techniques of collaborative learning and it imparted in the student, the knowledge one needs in day today life. The Indian formal education system has been founded on tradition and heritage. Nalanda was one of the first great universities in recorded history. Garten has made a remarkable statement of the stature of Nalanda; “the university was an architectural and environmental masterpiece. It had eight separate compounds, 10 temples, meditation halls, classrooms, lakes and parks. It had a nine-storey library where monks meticulously copied books and documents so that individual scholars could have their own collections” (2006).

The world education system which focuses modern research in higher education is “growing faster even than demand for the ultimate consumer good, the car” as stated by *The Economist* (2015). The education these days fulfil tech industry requirements which offer a decent job for the graduates. The prime aim of education became providing a job: rather than developing the intellectual and academic knowledge. Indian education system which followed British pedagogy after Independence received high criticism for polarizing people rather than giving them an opportunity to learn what they need (Aggarwal, 2009). The modern Indian management education follows more blended and flexible system which focus on core and elective based education.

After centuries the standard of Indian curriculum and teaching system is in the scanner of various inquiries. The curricula for Indian universities are planned and decided by a board of studies members who have strong academic background. The process of creating teaching methodologies, syllabi and curriculum designs are influenced by various social and political factors and such external and internal interventions affect the formulation of teaching learning strategies that should cater to the needs of the generation Y. This jagged system of education is often questioned and debated.

The governmental system in Indian education is structured in various levels and layers in which the role of administration sector is crucial. Most of the academic decisions are overruled by administrative loopholes. The political support beyond the sight of the academic sector, even complicates the teaching-learning system. The political influence of Indian education system could be found in each and every section of the learning system. There are two types of political influence in Indian education as observed by Kingdon and Muzammil. “One, Political influence from above which had been instrumental in shaping the education system; and two, the political lobbying and pressure groups from within the system originating at the local levels in the form of organizations of teachers”(2009).

On the other hand, efforts from the government in developing educational platform cannot be neglected. The Ministry of Human Resource Development controls the education quality in India mainly through The Department of School Education & Literacy and Department of Higher Education. There are separate bodies for each stream which control and regulate the educational standards and pattern. After Independence, the Indian government took measures for ensuring the right of education to everyone in the country (Rudolph, 1984) but its implication and design are yet to be analysed in the current scenario.

The management education in India seeks a changing phase, which is affected by major development policies of globalization and liberalization. The emergence of digital world need to be addressed within the social and political context before planning the

curriculum. Being a professional course, the teaching and learning process should concern about the changing trends in communication management, which forms the soul of a digital world.

### **Advancing ICT—What's Next?**

Curriculum implementation, according to Okello and Kagoire (1996) “is a network of varying activities involved in translating curriculum designs into classroom activities and changing people’s attitudes to accept and participate in these activities”. Nonetheless, curriculum implementers are faced with barriers which hinder the successful implementation of the curriculum. The structure of Indian Management education system is divided into various categories. There are Indian Institute of Management (IIM) which operates directly under the Indian government, departments operated under universities, B Schools which is approved by All India Council for Technical Education (AICTE) and private B Schools providing certificates by collaborating with foreign universities. There are a number of private management firms offering a management degree or diploma with the curriculum provided for their requirement. In such a system, implementing a unique curriculum for communication management will be sturdy. Although with more than 2000 + B Schools in India,<sup>1</sup> the basics of Information and communications technology (ICT) is implemented in management studies (Ray, 2014; Krishnaveni & Meenakumari, 2010; Neeru, 2009). But when considering on higher education like professional communication management, there is a need to go to advanced level from the basics of ICT. Further, in advancing the ICT, the management schools should be equipped with human and technical resources. The curriculum should keep on track with the resources and its proper monitoring. The Indian government found ICT as the one of the main principles of human development and operated midst of the complexities of social, political and economic environment in Indian schools (Garai & Shadrach, 2006). The Indian high schools students are enabled with basic ICT which acquire their ‘citizenship’ in a digital world; and the possibilities of future growth in Indian education is soaring (Chatterjee & Nath, 2015; Kozma & Vota, 2014; Ray, 2014).

With large numbers of schools, it is intricate to analyze the current curriculum in detail. But this study revised syllabus of major institutes with special mention on modern communication technologies and its application. After analysing, the researchers could find sufficient areas covered in Information system and management. For example, Indian Institute of Management, Ahmedabad provides a specialized area for Information System which covers Consulting in e-Governance: From Vision to Implementation, Digital Inclusion For Development, Enterprise Digital Infrastructure, ERP Systems: Technology Planning and Implementation, Management of Software Projects and Enterprises, Data Mining and Business Intelligence, Data Visualization for Decision Making, Strategies in the Internet Economy and Strategic Management of Information Systems.<sup>2</sup> The communication subjects are related to sociology, culture and political sphere. The candidate who handles communication and data management in organization faces much higher and complex forms of networks which these modules fail to address. The University of Mumbai is also providing the credits for communication and networking system. They cover the basics of hardware, networking such as protocols, LAN, WAN, Telecom technologies and databases.<sup>3</sup> The teaching design is divided into lectures, case studies and presentations. Symbiosis Institute Of Business Management under Symbiosis International University handles the new age communication topics like Knowledge Management Systems, E-Commerce, Cyber laws, Integrated Marketing tools and Business Process Management (Wipro, MS Project etc.).<sup>4</sup>

It is true that curriculum for communication management alone could not undergo the shift when weighed against the whole management course module. But the efforts should take from the side of schools and departments to bring out the obligatory changes. The managerial profession in digital world demands the communication manager to be omnipresent in the digital world using the ample algorithms and interfaces. Along with enabling the communication, they often need to monitor the communication process and interfere it time to time. The 21<sup>st</sup> century communication managers should be able to identify the perfect tool for their workspace and implement accordingly. The skill sets for achieving these areas need an advanced learning design which teaches, discuss and share on the collaborative learning system. The implementation of these concepts in our curriculum needs a transformation from formal pedagogic techniques to “cybernetically” distributed informal pedagogies of digital learning (Williamson, 2013). Here cybernetics deal with the various learning techniques adapted by the digital technology from the formal way of education. The overall curriculum should include areas of Internet security, privacy and security, relationship and communication, cyberbullying, digital footprint and reputation, self-image and identity, information literacy and creative credit and copyright. Through these inputs students could able to learn, examine, and expand the digital daily life to profession.

The implementation of such shifts in education requires the leadership with a team of trained and experienced “techno-teachers” who can motivate the students to work on such pedagogical systems. These can be enabled through potential strategies like virtual learning, blended learning, live projects etc.

## **Teaching and Learning Digital**

The ambiguity of future requirements is the main component which should be taken into consider when designing the pedagogical design. The Y generation in digital life have grasped the full implications of the basic new media tools of communication management. Sending e-mail, administrating online groups, submission of regular agenda online, arranging web cast and conferences and communicating through online chat rooms are few such skills which are blended with the everyday life of the new age students. The challenges of new age communication management should be considered as an opportunity to design changes in learning and teaching design. The digital age pedagogical researches are done with framework of universal design for learning (UDL); its practical application in the classroom and the outside real world<sup>5</sup> (Rose & Meyer, 2007). The focus on universal and regional balance should be there in pedagogical design. The studies and observations of Palfrey and Gasser on Digital Natives (2008) which discussed earlier in this chapter show that regional space could not be neglected while taking into consideration the digital life. The topics like social media management, dataveillance, augmented reality, cloud computing need to be included in curriculum, and teaching- learning design should be designed according to the need and application. These changes in the curriculum will reflect in the work profile, productivity and networking of future managers.

## **Social Media Management**

The role of social media in the digital age is evident in networking and social construction. The graduates who spend more personal time on social media need to bring attention towards the professional interface of Web 2.0. The possibilities of marketing, consumer relation, and public relation through social media, which is lower in cost and higher in productivity (reach). If the digital world is considered as the real world, human

communication could be replaced by social media interactions. The success of social bonding and relationships are directly related to the social media “engagements” of the person. While considering the social media tools for managers, the implementation of such tools in classrooms can be done by various methods. The platforms like Facebook, Twitter, Myspace, LinkedIn, Slide Share, and Flickr need no introduction for the students as the “citizenship” is registered. The students should be able to understand the inner meaning and patterns of social media applications. From the basics of the online presence to the analytical management of the content should be incorporated within the curriculum.

There are strong evidences of study to prove that social media have become a powerful personal learning tool within the classroom (Selwyn, 2007); the administration of social media can be provided through the training. The social media content and metrics are not constant, but the analyzing technique standards will be the same. Baer (2012) noted four main metrics of content marketing. They are consumption metrics, sharing metrics, Lead-Gen metrics and Sales metrics. Looking into detail, consumption metrics deals with the number of people involved (read it as viewed, downloaded) with the content. It indicates the size of our audience. The sharing metrics give an idea how often the content is shared with others. The analyzing of sharing is important in social media, because content which goes more viral has got higher chances of getting actual results (Pescher, et al. 2014). The Lead - Gen metrics gives managers an idea how many people really tried their content (product). Sales metrics deals with the original outcome of their content. The communication management curriculum should be updated with lessons on tools like Buffer, Kred, Tweetreach, Peerindex, and TwitterCounter which help in analyzing the social media.

## **Dataveillance**

If the content management will help in the advertising, promotion and marketing; the monitoring of the data and users are also important in digital reality. Here the ‘data’ is not just confined to the content, but has got multifaceted attributes like user identity, network tracking, audience preference, geo – locating and other crucial information. This information base should be handled with extreme concern since it deals with security and ethical problems (Hagel, 2014). The privacy of the user in the digital world is the responsibility of the manager. The anonymous identities which managers come across in the cyber world should be treated with high level of surveillance. Such surveillance is often credited in digital terminology as ‘Dataveillance’. The classical definition for Dataveillance is “the systematic use of personal data systems in the investigation or monitoring of the actions or communications of groups of people” (Clarke, 1998). However, in the digital world the meaning and concept changed over a decade along with the world reality. Through the recent reading of data security and privacy researches, Dataveillance could be defined as monitoring an individual or organization’s online activity (digital identity) through various data tools usually through unscrupulous methods (Palmer, et al. 2014; Gomer, et al. 2014; Gupta, 2014). The topics of Dataveillance should cover identifying the legal and ethical issues of data handling. In a country like India, where cyber laws and regulations still need a concrete attention, learning Dataveillance needs more ethical stands. Teachers could give assignments of data collection from social media and analyze it on the basis of need. The data managers can manipulate and reconstruct the data which will lead to a massive operational shift in business. The crucial awareness of privacy from an individual to an organization should be learnt from global and Indian perspective. However, the practical use of such data monitoring is interdependent with the organization and the data available.



## **Cloud Computing**

To continue with data management, the communication managers in the digital world is responsible for data security of an organization. Thus, knowledge and experience in cloud computing are critical for every management student. The understanding of cloud infrastructure helps to organize content, communication systems, applications and. It also helps to collaborate and monitor whole communication interface. The effective virtual space management depends on how well the manager is connected within the organization. In the digital world the workspace and connectivity are out of brick. More often, the manager needs to monitor “digital citizens”<sup>6</sup> who are online which requires a hybrid cloud computing system.

The curriculum should be able to focus on binary image building for setting up the cloud computing system. The process involves the making “exact copies” of real computer into the virtual space. The data, servers and application could be made into virtual copies through the binary imaging. There are ready made interfaces like Google Drive, Copy.com and Dropbox available. Although, customizing an in house hybrid clouding network will enhance networking, security and connectivity within the organization. The risk involved in cloud computing in India is concerned with the accessibility of internet and connection speed. The managers travelling about the city need connect to the network to operate and monitor the system. The development of Mobile cloud Computing (MCC) and cross-platform mobile applications will unravel the multidimensional coding and fragmenting issues(Sanaei, et al. 2014). Economically, India’s promising internet future and web technology give assurance to the students who prepare to manage the digital future. Often, the intact cloud computing interfaces are collaboratively managed with IT support, but the understanding of networks and system through curriculum should be provided for the students. The internal projects and lab assignment on clouding system and reviewing the peer group projects will enable the students to explore the complexity of the virtual world. The hybrid cloud computing provides new power boundaries within the organization and positions. The managers will be more of techno-managers and data executives who manage the digital world and its citizens through the networks.

## **Augmented Reality**

Teaching and preparing curriculum design of Augmented Reality for management students will be most challenging and appealing at the same time. The reality conceived by digital natives is mainly through the digital platforms which they come across. The role of video games and other virtual reality application create virtual reality mind-set for the students. While economists and management experts believe wide opportunity in Augmented Reality (Murphy, 2014; Maytom, 2014), it is important to define it in management point of view. Augmented Reality can be explained as interlink with real and digital world where the environment is built through computer generated applications. The Augmented Reality helps managers to create the world according to the desire and position of organization. It is time saving, clear and direct. The curriculum can include Augmented Reality as a topic in which students should able to learn the concept and possibilities of Augmented Reality. The Augmented Reality can also collaborate with other curriculum subjects so that the application can be developed in the student’s mind. The students can create projects and assignment by using tools of Augmented Reality. Furthermore, such presentation skills will help managers during beefing the project and providing explanations. Technological monsters like Augmented Reality should bring out of desk and should made available for future managers.

## Algorithms and Interfaces

The evolving digital world and its changes are often attributed with the interface it uses and algorithm by which they perform. The acquaintance on digital media algorithms and calculation provide better understanding of human – computer interaction. The managers can create and develop the tools based on the requirement and situation. In simple terms, computer algorithms are well-defined working procedures or formula allowing a computer to solve the problem. The data management requires systematic updates based on changing the interface. The algorithmic designs into the management curriculum will give students advanced machine learning and solving methods. The recent researchers on communication management and the digital world, Frey and Osborne, (2013) note that the future managers will be requiring creative and social intelligence; and it will redefine the 21<sup>st</sup> century workplace and skill sets (Autor and Dorn, 2013). The curriculum should also focus on advanced computer and Internet networking participants such as Internet Protocol, Domain registration, Network Mapping, Network Neutrality constant, LAN, WAN and Ethernet.

The curriculum should address these concepts to the digital natives in the way they live and prepare them to face future digital reality. The tools and methods should be blended with virtual learning and traditional classroom. Even though, communication management as core subject still needs to emerge, the whole curriculum of communication management should cover the interactive requirements needed for other streams such as human resources, finance, accounting, administration and marketing. The shift in curriculum design could construct future manager flourish in digital reality only if these curricula are independent of political and social concerns. Besides, these conceptions should be able to elucidate in Indian context.

## Theory to Practice

The relation between learning environment and digital life of students are vital in measuring outcomes of the curriculum for digital age communication management. As discussed in various literatures above, the digital identities are depended values which can be moulded through accurate teaching and learning design(Fig 1). The following are the factors which affect the relation between learning environment and digital life of students:

- (i) The life experience through cyber world.
- (ii) The quality of curriculum.
- (iii) The teaching and learning methodologies.
- (iv) The expectation of the future digital world.
- (v) The actual market needs for a communication manager.

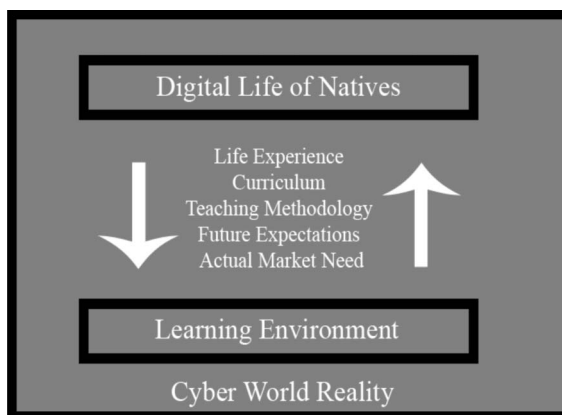


Fig. 1: Relation between digital life and learning environment

The blended learning methods will be the preeminent mode of learning by which students can start work on a platform which equate the future organization. The peer to peer learning, virtual leaning, social media experiments are a few methods which can be adopted by B Schools. Amidst the communication shifts, internationalization, the cross cultures, strategic alliances, partnership & mergers are the other elements which concern the management education. The Schools or Universities should try to collaborate with the international communication stakeholders through which students will get to know the latest technologies and its application. To deliver equity as well as excellence in producing innovative smart techno managers, a modern and democratic excellent B Schools needed to be established. The expense and currency involved in effective curriculum implementation stops most schools to drill pedagogical shift. In India, education loans are available on basis of repayment after employment students could afford higher education at perversedues. The huge role should be played by policy makers of to impart grants and studentship for students of professional courses. Greater efforts need to be made to control the costs of education through effective technological measures. The communication management education needs to do more to prove its value since digital natives could earn a communication profession job with their life experience alone.

## Notes

- <sup>1</sup> As per the information from the Approval Process Handbook 2014-15 - AICTE
- <sup>2</sup> From official website of IIMA.
- <sup>3</sup> From the course handout of MMS Program – University of Mumbai.
- <sup>4</sup> From the course handout of MBA Program – Symbiosis International University
- <sup>5</sup> Digital world/Digital Reality
- <sup>6</sup> Other Employees

## References

- Aggarwal, J (2009). *Landmarks In The History Of Modern Indian Education 6<sup>th</sup> Edition*. Vikas Publishing House Pvt Lt: New Delhi.
- Altheide, D., & Johnson, J. (1980). *Bureaucratic propaganda*. Boston: Allyn and Bacon.
- Autor, D., & Dorn, D. (2013). The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market. *American Economic Review*, 1553-1597.
- Baer, J. (2012, November 3). A field guide to the 4 types of content marketing metrics. Retrieved March 2, 2015, from <http://www.slideshare.net/jaybaer/a-field-guide-to-the-4-types-of-content-marketing-metrics>
- Buckingham, D., Ito, M., Davidson, C., Jenkins, H., Lee, C., Eisenberg, M., & Weiss, J. (2008). Foreword. In *Youth, identity, and digital media*. Cambridge, Mass.: MIT Press.
- Bulger, M., Mayer, R., & Metzger, M. (2014). Knowledge and processes that predict proficiency in digital literacy. *Reading and Writing*, 27(9), 1567-1583. doi:10.1007/s11145-014-9507-2
- Cain, J., & Romanelli, F. (2009). E-professionalism: A New Paradigm For A Digital Age. *Currents in Pharmacy Teaching and Learning*, 1(2), 66-70.
- Calhoun, C. (1998). Community without Propinquity Revisited: Communications Technology and the Transformation of the Urban Public Sphere. *Sociological Inquiry*, 68(3), 373-397.
- Chatterjee, P., & Nath, A. (2015). The Future ICT Education in India - A pilot Study on the Vision of Ubiquitous Learning in Higher Education. In J. Mandal, S. Satapathy, M. Kumar Sanyal, P. Sarkar, & A. Mukhopadhyay (Eds.), *Information Systems Design and Intelligent Applications, Advances in Intelligent Systems and Computing* (1st ed.). Springer.
- Clarke, R. (1988). Information technology and dataveillance. *Communications of the ACM*, 498-512.

- Donald, M. (2014). The Digital Era: Challenges for the Modern Mind. *Cadmus*,2(2), 68-79. Retrieved April 5, 2015, from <http://www.cadmusjournal.org/files/pdfreprints/vol2issue2/reprint-cj-v2-i2-the-digital-era-mdonald.pdf>
- Frey, C., & Osborne, M. (2013, September 17). The future of employment: How Susceptible are jobs to Computerisation? Retrieved February 1, 2015, from [http://arche.depotoi.re/autoblogs/wwwinternetactunet\\_8a3fe3331e0ad7327e18d9fe6ec3f0ad04dcea58/media/3722fa7d.The\\_Future\\_of\\_Employment.pdf](http://arche.depotoi.re/autoblogs/wwwinternetactunet_8a3fe3331e0ad7327e18d9fe6ec3f0ad04dcea58/media/3722fa7d.The_Future_of_Employment.pdf)
- Friga, P., Bettis, R., & Sullivan, R. (2003). Changes in Graduate Management Education and New Business School Strategies for the 21st Century. *Academy of Management Learning & Education*,2(1), 233-249.
- Garai, A., & Shadrach, B. (2006).Taking ICT to Every Indian Village: Opportunities and Challenges.*One World South Asia*. Retrieved April 7, 2015, from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=897910](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=897910)
- Garten, J. (2006, December 8). Really Old School. Retrieved April 16, 2015, from <http://www.nytimes.com/2006/12/09/opinion/09garten.html>
- Gomer, R., Milic - Frayling, N., & Schraefel, M. (2014). The Grey Web: Dataveillance vision fulfilled through the evolving Web. Retrieved March 15, 2015, from [http://eprints.soton.ac.uk/364394/1/webData\\_techrep.pdf](http://eprints.soton.ac.uk/364394/1/webData_techrep.pdf)
- Goos, M. (2013). How the world of work is changing: A review of the evidence. Retrieved May 10, 2015, from <http://feb.kuleuven.be/public/n06022/ILO-20131205.pdf>
- Gupta, M. (2014).*Handbook of research on emerging developments in data privacy*.IGI Global.
- Hagel, J. (2014). Nine Ways to Improve Data Security.*Journal of Accountancy*,218(3).
- Hiltz, S., & Turoff, M. (1978).*The network nation: Human communication via computer*. Reading, MA: Addison-Wesley.
- Hobbs, R. (Director) (2015, February 19). From audiences to authors - Children and young people as content creators and global communicators. *ICMC 2015*. Lecture conducted from MICA, Ahmedabad.
- Hsi, S. (2007). Conceptualizing Learning From The Everyday Activities Of Digital Kids. *International Journal of Science Education*,29(12), 1509-1529.
- Ray, A. (2014). Imperatives of Access, Equity and Quality in Indian Technical Education System: Role of ICT. In R. Huang (Ed.), *ICT in education in global context: Emerging trends report 2013-2014* (pp. 143-162). Springer.
- Huang, R., Kinshuk, & Price, J. (2014).*ICT in education in global context: Emerging trends report 2013-2014*. Springer.
- Jagadeesh, R. (2000). Assuring quality in management education: The Indian context.*Quality Assurance in Education*,8(3), 110-119.
- James, R. (2012). Out of the box: The perils of professionalism in the digital age.*Business Information Review*, 52-56.
- Jenkins, H. (2009). *Confronting the challenges of participatory culture: Media education for the 21st century*. Cambridge, MA: The MIT Press.
- Keen, S. (1982). News or Propaganda?*The Australian Journal of Chinese Affairs*, 153-158.
- Kingdon, G., & Majumdar, M. (2009). The Political Economy of Education in India: The Case of U.P. *Oxford Development Studies*,37(2), 123-144.
- Krishnaveni, R., & Meenakumari, J. (2010). Usage of ICT for Information Administration in Higher education Institutions – A study.*International Journal of Environmental Science and Development*,1(3), 282-286.
- LAMP.(2004). *International Planning Report*. Montreal: UNESCO, Institute for Statistics.
- Littlejohn, A. (2009, January 28). Learning Literacies in a Digital Age. Retrieved March 16, 2015, from <http://www.webarchive.org.uk/wayback/archive/20140614091049/http://www.jisc.ac.uk/whatwedo/projects/elearningllida.aspx>
- Martin, A. (2005). DigEuLit—a European framework for digital literacy: A progress report. *Journal of ELiteracy*,2(2), 130-136.
- Maytom, T. (2014, June 12). World Cup Sees McDonald's Twitter Trend Globally Promoted. Retrieved February 10, 2015, from <http://mobilemarketingmagazine.com/world-cup-mcdonalds-twitter-trend-globally-promoted>
- Mostaghimi, A., & Crotty, B. (2011). Professionalism in the Digital Age.*Annals of Internal Medicine*,154(8), 560-578.

- Murphy, D. (2014, April 9). Zappas Brings AR to Asda Stores For Easter. Retrieved March 10, 2015, from <http://mobilemarketingmagazine.com/asda-zappas-easter-campaign>
- Neeru, S. (2009). ICT in Indian Universities and Colleges: Opportunities and Challenges. *Management & Change*,13(2), 231-244.
- Okello, V and Kagoiren, M. A., (1996) : *Makerere University, Curriculum Studies Module*. Kampala: Bezatel Design Studies.
- Palfrey, J., & Gasser, U. (2008).Introduction. In *Born digital: Understanding the first generation of digital natives* (p. 13). New York: Basic Books.
- Palmer, D., Warren, I., & Miller, P. (2014).Privacy, Dataveillance, and Crime Prevention.In R. Alhajj& J. Rokne (Eds.), *Encyclopedia of Social Network Analysis and Mining*.Springer.
- Pescher, C., Reichhart, P., & Spann, M. (2014). Consumer Decision-making Processes in Mobile Viral Marketing Campaigns. *Journal of Interactive Marketing*, 43-54.
- Petrow, S. (2014, June 2). Your Digital Life: New column takes on modern problems. Retrieved February 19, 2015, from <http://experience.usatoday.com/weekend/story/lifestyle/2014/06/02/your-digital-life-new-column-takes-on-modern-problems/9865485/>
- Popli, S. (2005).Ensuring customer delight: A quality approach to excellence in management education.*Quality in Higher Education*,11(1), 17-24.
- Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.
- Rose, D., & Meyer, A. (2007).Teaching Every Student in the Digital Age: Universal Design for Learning.*Educational Technology Research and Development*, 521-525. Retrieved May 1, 2015, from <http://eric.ed.gov/?id=ED466086>
- Rudolph, L. (1984). *The modernity of tradition:Political Development in India*. Chicago: University of Chicago Press.
- Sahney, S., Banwet, D., &Karunes, S. (2008). An integrated framework of indices for quality management in education: A faculty perspective. *The TQM Journal*,20(5), 502-519.
- Sanaei, Z., Abolfazli, S., Gani, A., &Buyya, R. (2014). Heterogeneity in mobile cloud computing: Taxonomy and open challenges. *IEEE COMMUNICATIONS SURVEYS & TUTORIALS*, 1-24.
- Selwyn, N. (2007). Web 2.0 applications as alternative environments for informal learning — A critical review. *OECD CERIKERIS International Expert Meeting on ICT and Educational Performance*.
- Spector, J., Merrill, M., Elen, J., Bishop, M., Kozma, R., &Vota, W. (2014). ICT in Developing Countries: Policies, Implementation, and Impact. In *Handbook of Research on Education Communication and Technology* (4th ed.). New York: Springer.
- Spitzer, B., Morel, V., Buvat, J., Kvj, S., Bisht, A., &Radhakrishnan, A. (2013).*The Digital Talent Gap :Developing Skills for Today's Digital Organizations*. Capgemini Consulting.
- Taylor, T. (1999). Life in Virtual Worlds: Plural Existence, Multimodalities, and other Online Research Challenges. *American Behavioral Scientist*,43(3), 436-449.
- The World is going to university (2015). *The Economist*. 414 (8931), 11.
- Tyler, T. (2002). Is The Internet Changing Social Life? It Seems The More Things Change, The More They Stay The Same. *Journal of Social Issues*,58(1), 195-205.
- Williamson, B. (2013). *The future of the curriculum school knowledge in the digital age*. Cambridge, Mass.: MIT Press.
- Zhao, S. (2004). Consociated Contemporaries As An Emergent Realm Of The Lifeworld: Extending Schutz's Phenomenological Analysis To Cyberspace. *Human Studies*, 91-105.
- Zhao, S. (2005). The Digital Self: Through The Looking Glass Of Telecopresent Others. *Symbolic Interaction*,28(3), 387-405.
- Zhao, S. (2006). The Internet And The Transformation Of The Reality Of Everyday Life: Toward A New Analytic Stance In Sociology. *Sociological Inquiry*,76(4), 458-474.

**Dr. Soumya Jose** is an assistant professor of English in VIT University, Vellore, Tamil Nadu, India. Her research interests include post-colonial writings, African-American literature and diaspora studies.