ICTs and Arunachal Pradesh Educational System: Challenges and Benefits of Harmonization of Instructional Technology

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In the present era of Globalization, the educational institutions can become significant players both in providing quality education both content wise as well as in their outreach within any given society if provided with appropriate information technological tools (ICT). These institutions and their educational curriculum are certainly of great importance as they are for a growing child's understanding of one's own country, its varied national interests and above all the rich content of the state's various policies and their significance in the building up of required skills on the part of the youths for the society's development and also to have a competitive edge in today's emerging world. Besides the high quality of education and its availability not only has an important role in the shaping of the minds of the children of one's own society, it also has the ability to influence the self image, the feeling of belongingness to one's country and above all improves their stakes in the development process as well as by their participation. In this context, the availability and richness of educational system in a given society, howsoever diverse it may be, requires to be given importance at the time of framing of state's educational policies and their proper implementation as it helps in enriching the youth's determination, understanding and their role in today's rapidly networking world.

It is now widely acknowledged that education is the lifeblood of any society's economy as well. Today it is being assumed that the economy can go up multifold, when existing educational institutions like schools, colleges and universities, can provide important curriculum, particularly in terms of skills, area studies, foreign languages and also intercultural appreciation. As education systems and its outreach now increasingly transcend our society's borders, the various types of educational activities of these institutions are in need of being complimented by various innovative instructional technology, so that the quality aspects of the educational system can be suitably upgraded to the extent it becomes modern, technology oriented and above all qualitatively improved, both content wise and context wise. Moreover, it requires to be emphasized here that these actions, though are limited to the area of education, are sure to have lasting effects on our society's credibility vis a vis the wider world. In the emerging networked world, being mediated by IT (Information Technology), such educational institutions and the learners are apt to become instruments of public diplomacy, as much as they get to become self reliant and important actors in the growing economy of our society.

It is well known and universally recognized that instructional technology is the key to enhancement of quality in the imparting of education to our next generation in the new millennium[i].Further it will make possible good education within everyone's reach with increased use of information technologies. For this reason the investment in educational

technology, has been strongly argued by various intellectual thinkers as they have felt that with rich educational technology, quality will continue to increase rapidly, creating a "new educational culture"[ii] and will also reflect a situation where our society will surely be moving from technological possibility to richer student learning.

There has been growing criticism that the traditional mode of imparting education sans information technology, there has been rapid decline in the quality of education being offered by various institutions of the east, which is perhaps, inter alia, one reason as to why these traditional societies continue to be backward in the field of educational attainment. With increased use of IT, it is argued that as education becomes highly interactive, with engaging the learner every time or so for a response, much in contrast to past passive lecture methods, it will also be a rich experiment both in terms of reflection and deep understanding of the subjects. When the education as such becomes highly accessible given its widened reach aided by ICT tools, it will also be useful in opening several opportunities for the disadvantaged millions in this country as it has been so for the other developing countries in Asia.

Educational System in <u>Arunachal Pradesh</u>: The Embedded Challenges

As far as Arunachal Pradesh as a state is concerned, though it is located in the easternmost part of India ,yet it can be seen that it enjoys a high literacy rate compared with other states within India as its average literacy rate, as per the 2011 census report was 66.96%.The state proudly can boast of an educational system, similar to the national level, as it has a uniform structure of 10+2 system within School education and Higher education consisting of post 10+2,that includes college and university level degrees. The Medium of instruction is throughout English both at the school and college and university level within Arunachal Pradesh. Yet it is seen that while certain limited number of colleges and university and other higher technical institutes, have been quick enough to adopt information technologies into their teaching methods, the schools run by the state government, tend to lag behind due to their lack of awareness about the importance of ICT as a medium of instruction besides lack of support in terms of funds by the government and other patrons. The State as such can be seen to be offering a mixed model of instruction within its education sector and that too in the urban and rural areas of the state.

What's not being realized so far is that the continuation of both traditional and delivery of education through IT in a mixed model, within the state, with many institutes on the basis of paucity of funds expressing their reluctance to embrace IT, however, carries higher economic costs - costs society may not be willing to bear. This not only demonstrates a kind of institutional inertia but also is suggestive that the "effects of information revolution" may be slow in reaching most campuses and hence will have few measurable effects in the immediate future.

Under these conditions, the eventual danger, is the emergence of a two-tier educational system - a more expensive upper tier with sound traditional education supplemented with the benefits of full IT mediated access to learning, as in case of private schools and colleges and universities and a cheaper inferior tier as in case of government funded schools and other institutes, dispensing programmed training that meets objectives which are far narrower than the traditional goals of liberal education, as can also be seen in case of schools located in the villages.

In this area of Education, the challenge that we need to confront is that of providing a common kind of educational instruction mediated by the use of IT that will ensure equal opportunities for the students/learners coming from both poor and the rich section within the society and to build up a society that can be inclusive at least within the education sector. In this respect it is of great importance that we need to analyze the ways as to how in the future, the application of the ICTs and development requirement can be properly harmonized within our educational system which is the most dependable media for equal opportunities for all sections of the society, so as to be able to build an equal world..

Harmonization of the ICTs into the Educational System

In this direction the task of suitably addressing the challenges of developing a future ICT infrastructure within our emerging development process, that is capable of delivering the services and applications to be required by the general and professional educational ,both private and public institutions will have to be given priority given the fact that the ICT area has undergone different level of experience through its different phases during the last many decades, i.e., starting with the phase of liberalization and privatization of the ICT infrastructures in the 1980s to the late 1990s,wherein much emphasis came to be laid on issues of convergence . Thereafter it has been markedly seen that the ICT arena, has reached a stage akin to a crossroad as it is now faced with both policy challenges and options in the context of the socio economic development of particularly the poor countries, with the development of new technology.

The prevailing competitive situation in the ICT markets, the emerging processes of convergence of IT, telecoms and the media besides the increasing deployment of social and business applications of ICT in all areas of society are considered to be significant factors contributing to the challenges at different levels, which also has led to increasing demand for developing the ICT infrastructures both in the urban centres and especially in rural areas. When we look into the issues of effectiveness and the competitive demand, since the 1990s with respect to the development of ICT infrastructures, it has become clear that not only the convergence of IT, telecoms and the media, has become increasingly a dominant phenomenon as can be seen by the ascending importance of services and applications in the development of our society but also that the present day social and business applications, health care,

education etc., also require a higher level of network services, which can only be met by a well mediated IT network. These new requirements have now put new and unforeseen demands on the ICT infrastructures, mandating an assured quality of service, stability and adaptability, which requires a new set of IT trained learners within the educational arena.

As such it can be seen that as the situation is highly astounding as faced with a range of serious challenges ,which calls for radical changes in the training for use and development of technology besides and deeper structural changes in the educational, economic and political arena. This also necessitate a significant change in the involvement of stakeholders in the whole process, besides requiring the various state institutions, to be highly proactive, in the direction of enactment of appropriate legislation and policy as well.

State Policy and Institutions: Required Proactive Actions for Appropriate Educational Policy

The increased supply of these High-level ICT skills has the capability of fulfilling the need for rapid growth in our society as the ICT sector is considered to be of strategic economic importance not merely in terms of its ability to attract huge investment, but also in the field of exports and high quality jobs. Its rising productivity and profitability within the overall emerging economy also is held out to be leading towards rapid increase in employment over the coming decades.

Hence in the context of framing an appropriate educational policy in this area, the state will have to bear in mind, the future requirement for application of high-level ICT skills within our educational system and the demand for people with such skills in almost all productive sectors of our economy. Within the educational policy of the state, strong emphasis is required on the issue of providing a sufficient quantity of skills, besides the provision of desired skills of sufficient quality as also a sufficient diversity of skills in accordance with the complexity and diversity of ICT application, within the economy.

In this direction, investment in educational technology is urged upon policy-makers as the path to educational quality.[iii]It has been also pointed out that whatever problems may arise can be better handled through better administrative and technological planning - that is, the desired total quality assurance can be ensured by our seriously using information technology in higher education.[iv] It is true that sharp and continuous criticism of the traditional form of imparting education, has compelled a number of recognized higher education organizations to formulate quality standards and guidelines to achieve the goal of quality education ,yet it is unfortunate that the educational institutions at other levels and particularly in the rural areas remain far away from the much needed realization about the necessity for immediate adoption

of the rapid growing IT into their instructional medium, which deprives their learners from having quality and enabling education, which is their basic entitlement.

With increased use of IT, we can not only make education highly accessible, as it will open opportunities for the disadvantaged, with the highly computer-mediated learning and skills enhancing. Such rapid adoption of IT mediated Education will lead to more modern technology mediated instruction in place of age old traditional education. With such initiatives, education will not only become highly interactive, constantly engaging the student/learner every time, the possibility of access of educational resources, will also increase infinitely, which will enhance rapid learning by the students as also enabling a system of education tailored for each student' in keeping with their learning experiences and styles.

Under these circumstances, it is to emphasize that perhaps some sort of guidelines, for ensuring of "quality" as applied to education, are perhaps necessary to ensure that learning outcomes are appropriate to the rigor and breadth of the degree of learning, which can facilitate gainful engagement such as employment and /or entrepreneurship on the part of learners as equipped with required knowledge. Increased use of ICTs will also ensure that while appropriate learning resources are available to students, quality education is also delivered in terms of "certainty" of specific, measurable "learning outcomes" or "competency-based objectives." With most educational institutes turning to be technological savvy partly with increased support from the government and the society and partly due to the changing demands of liberal education, passing through a fast paced change, reaping the benefits of full IT mediated access to learning as compared to traditional mode of education, will prove to be much useful both in the dispensing of quality training and for building up an inclusive society bridging the gap that exists between the information have and have-nots.

End Notes

[i] Fiske, Edmond and Bruce Hammond (1997). Identifying quality in American colleges and universities. Planning for Higher Education,26(1): 8-15

[ii] G. P. Connick, (1997) "Issues and trends to take us into the twenty first century", New Directions for Teaching and Learning, 71, pp 1-7.

[iii] Mergendoller, John R. (1996). Moving from technological possibility to richer student learning: Revitalizing infrastructure and reconstructed pedagogy. Section 4: Grading the policymakers' solution. Educational Researcher, 25(8): 43-45.)

[iv] Roth, Brenda F. and Denisha Sanders (1996). Instructional technology to enhance teaching. New Directions for Higher Education, 94: 21-32.