A Simplified Approach for Using Information and Communication Technology in Primary Education for the Development of Rural Area

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Abstract - Student, Especially those in developing countries, have inherited a legacy of discrimination and oppression which manifest in poverty, health issues, violence, limited access to basic needs, resources and employment. The challenges facing students in the areas of economic empowerment, access to land and access to science and technology are still a barrier to own development and it remains a challenge to level the playing fields. As Developing Nations seek to control limited resources toward the goal of achieving a developed status they must reevaluate past practices and explore available and affordable technologies. Where information and communication infrastructures are weak, use of low-cost, easily distributed technologies have proven effective. Still, many developing nations have failed to incorporate a resource in great abundance, to use these new technologies to greatest advantage. The aim of the implication of the concept of ICT in the education in R. Macedonia is to train the teachers to use that technology, the educational process to be based on the principles of the interactive teaching, with an accent on the creative learning, critic thinking, the problems solving and instigation of the modern educational technology. This paper focuses on various research methodologies for developing the primary education of students from rural area.

Keywords: - ICT, Primary Education, Participation, Rural development.

I. INTRODUCTION

In the space of one generation, Information and Communication Technology (ICT) [1, 2, 3] has changed the global macroeconomic landscape. Business leaders, educators, and politicians all have watched as formerly subsistence economies leveraged ICT to become indispensable knowledge resources to the supposed heads of world commerce. Countries that less than ten years ago relied on foreign aid to feed their people, today supply value-added information services to mature and nascent economies alike. Developing nations, whose exports once consisted primarily of raw materials and farming production, now proclaim to the world the technical proficiency of their knowledge workers. Even in societies where ICT has just begun to take root, rural villagers make use of the Internet to bring their goods to the international market. Nations that capitalized on the information technology age have recognized significant return on their initial ICT investments. Rural economies, particularly those dependent on agriculture, have been affected by the processes of globalization leading to the restructuring and decline of the agricultural sector, the growth of the service sector and increased emphasis on technology.

In many areas, this has created unprecedented work and employment opportunities, as well as bringing changes in the role and status of women. These changes have also contributed to further shifts in population, with some rural areas close to towns and cities coming under pressure, while many remote areas continue to suffer a decline in population. The introduction of ICT in education has changed the traditional way of teaching and learning and forced the teachers and students to adapt their technical abilities and knowledge of ICT [7]. The teachers involved are keen to analysis the data and discuss how to develop the initiative further in preparation for a repeat next year. With ICT, the knowledge required to make economic revolution happen can now be accessed by developing nations, bringing about a level of education and economic opportunity hitherto unimagined [8].

The aim of the integration of the ICT in the teaching within the primary education is to involve, examine and discus the effective, technological improved practice that can help the teachers to exceed the challenges that will arise from the attempts for integrating the technology in the curriculum. The integration of the ICT is much more than a simple use of the hardware and software. For the teachers, the biggest challenge is to define how to use the new technology for the teaching's aims. Even though the teachers understand the theoretical concepts very easy they need special concrete ideas that will help them with the initial experiments with the new technology. ICTs at schools will have little impact if teachers are not actively involved in all phases of their integration to the curriculum.

Therefore the role of teacher at this point is vital. Teachers are required to decide how to make appropriate educational use of ICT in the classroom, where there are no longer lecture-based or didactic teaching methods in classrooms any more. Teachers need support and training to positively integrate technology into their classroom and teacher attitudes toward ICT may be a significant factor in the implementation of ICT in education [4]. Many of the teachers and the educational policy's creators are wrong because they think that the ICT's integration approaches more to the computer as to a special subject- informatics, than as to a mean for improving the process of teaching. With the use of the Information and Communication Technology in the primary education's teaching are enabled to use and to develop their informational and communicational abilities as a support to their learning.

II.   RURAL DEVELOPMENT- SURVEY

The 26 crore people in India lived below the poverty line and emphasized that the nation has to lift them up. The rapid changes in the world and make their individuals equip with the qualifications arise from this new environment requirements, access, produce and use information will be able to be influential and successful in the 21st century [6]. Today GDP growth rate is about 6%, it has to be lifted up to 10% and be sustained for several years. The PURA (Providing Urban Amenities in Rural Areas) plan had been conceived with this aim in mind. The Government has taken up this ambitious programmed to be implemented, throughout the country. With the PURA programmed aiming at integrated development of six lakh villages in the country by 2020 through 50,000 development centers, the government has identified 5000 villages for such integrated development in the next five years. In the past, development of rural sector has not been to the expectations despite this sector receiving due importance.

The experience shows that the initiatives were fragmented or overlapping or else they started well but over the time their thrust weakened or vanished in thin air. It is for the first time that PURA programmed envisages integrated development with focus on employment generation, driven by strengthening of habitat, health care, education, skill development, physical and electronic connectivity and marketing and, thus, leading to sustainable development. Case studies highlighting the importance of ICT in teacher education programmers in the Asia-Pacific region showed that teachers and schools face a considerable range of challenges, including infrastructural issues such as lack of power, telephone and Internet access, which hinder the effective use of ICT in teaching and learning [4]. In the past, development of rural sector has not been to the expectations despite this sector receiving due importance.

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Through excellence and independence in evaluation OED has enhanced development in rural areas effectively. OED assesses what works, and what does not; how a borrower plans to run and maintain a project; and the lasting contribution of the Bank to a country's overall development. The goals of evaluation are to learn from experience, to provide an objective basis for assessing the results of the Banks work, and to provide accountability in the achievement of its objectives.

III.   IT IN RURAL AREAS: CONCEPTUAL FRAMEWORK

We examine the potential for rural IT use, both from supply and demand perspectives. On the supply side, we examine the technical and organizational issues that arise for delivering IT-based services to rural populations in India.

On the demand side, we examine the potential benefits that IT can bring to these populations, if the implementation is successful. We begin with the demand side, as a way of motivating the supply side issues.
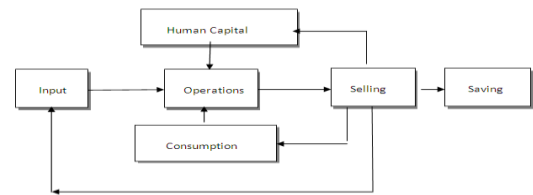

Figure 1:- Rural Household Economic Decision

Potential sources of demand for IT-based services can be framed in terms of a simple flow diagram representing the decisions of rural households. We will treat a typical household as engaged in farming, though this will not be true for all of them. Figure 1 presents a simplified representation of the various economic decisions. To the extent that these activities are also subject to inefficiencies, it may be the case that, in order to be successful, IT-based interventions geared towards rural households will have to simultaneously alter the institutional environment, or else achieve sufficient scale and scope in order to impel changes in it.
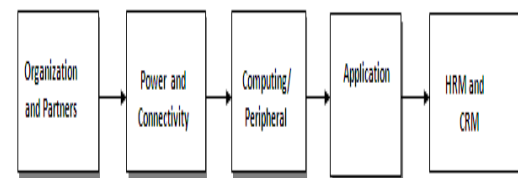

Figure 2: - Value Chain for IT Based services

IT-based services in terms of a typical value chain, as shown in Figure 2. At each stage of the chain, the IT components include a mix of hardware, software and services. In addition, the creation of an organizational structure and value network is a critical first step, while managing human resources and customers is vital for successful final implementation. The organizational structure typically requires commercial goals of profitability to be built in. This is easily done through a standard corporate structure. It is clear that, for scalability, some minimum size of the organization is required. In addition, there are fixed costs of innovation that can be spread more effectively across a larger organization. Social goals can be incorporated in two ways. For organizations that are dedicated specifically to rural IT-based services delivery, controlling ownership of the corporation by a non-profit entity provides the social focus. For existing corporations with broader businesses, social goals may enhance reputation, meet corporate social responsibility guidelines, or otherwise be consistent with the mission and values of the organization. In other words, including social goals may make good bottom-line business sense.

IV.   RESEARCH METHODOLOGY

A.   *Microsoft Products [10]:*

The project E-SCHOOL [2] in collaboration with the Ministry of education and science, the Information and Communication Technology is included in the curriculum. The following ICT applications are included: Microsoft Word, Microsoft Paint, Microsoft PowerPoint, Microsoft Excel, Microsoft Publisher, Microsoft Front Page, Blogs, E-

Mail and Internet Explorer [10]. The results from the previous research showed that the most frequently used ICT applications in the teaching in the primary education are Microsoft Word, Excel and Power Point [5]. Most schools recognize that word-processing predominates and that children have few, regular opportunities to control devices, use multi-media software and to communicate electronically. There has been a significant investment in ICT in primary schools in terms of infrastructure and staff development. The children continue to have limited experience of, for example, creating and maintaining websites and conferencing using video. However, trends of usage indicate an increasing and more regular use by the children of multi-media and database software, and Internet searches.

B.   *Open Source Product [9]:*

There are various open source tool are available for developing children's age from 4 to 12 year old, it is to need to utilized the tool for children development. Following tool we are mention which may useful for children development.

a. *Number Race* The software is an adaptive game, which trains children on an entertaining numerical comparison task. It adjusts the difficulty of the task to their level of performance, maintaining their average success at 75%.It may also be useful for prevention of to teach number sense in kindergarten children without specific learning disabilities.

b. *Blokken* is an application which aim is to help children in primary and secondary education by making studying more fun and enjoyable.

c. *Plone SGS* (Submission and Grading System) is archetypes based Plone product which is primary designed to offer educational institutions a platform for publishing assignments and grading turned in completed assignments.

d. Curriculum Manager Project manages courses and curricula. Higher education is the primary target audience, and Currman should be useful to departments, schools, and colleges that need to define and manage majors, minors, and certificate programs.

e. *Funky Plot* is an interactive plotting tool for mathematical functions, designed for pupils and students.

f. *Tux Math Scrabble* encourages kids to construct compound equations and consider multiple abstract possibilities.

g. *Jep* is a package for parsing and evaluating mathematical expressions. It currently supports user defined variables, constants, and functions.

h. *gattMath* is a educational math (graphical) program that show some concepts behind Integral and Differential Calculus, like Riemann, Simpson, Darboux, Trapezoid, Monte-Carlo integration, derivative, antiderivative, tangent and sure a plotter.

V.   CONCLUSION

Information and Communications Technology has a positive effect over the improvement of the teaching in the educational process. The senses from this research should be accepted by the teachers and applied in the educational practice. They are motive for more frequent use of the Information and Communication Technology in the teaching as a mean for improving the educational process. The ICT-application MICROSOFT product is used more frequently in the introduction and the main part of the classes for new

material and in the main part of the exercise lessons; while very rare the same ICT-application is used in the final part of the lesson for new material, exercise lessons. There is need to add some open source tool for developing the children development as an application of ICT.

VI.   ACKNOWLEDGEMENT

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