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ICT FOR EDUCATIONAL DEVELOPMENT OF RURAL INDIA

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Abstract

Information and Communication Technology (ICT) is an extensional term for Information Technology (IT) that stresses the role of unified communications and the integration of telecommunications and computers. ICT is a broad subject and the concepts are evolving. This paper is mere attempt to present a glimpse of ICT in rural areas. Information and Communication Technologies are the power that has changed many aspects. As world is moving rapidly towards digital information, the role of ICT is becoming more and more important and this importance will continue to grow and develop in 21st century. The paper deals with how effectively, the role of Information and Communication Technology (ICT) in education is developing and the challenges faced by student while learning because of lack of technical support and study material. For any country to progress, the women of rural areas contribute a lot in development of a nation. Education is the process of receiving or giving systematic instruction, especially at school or university level all over the globe. It is the strongest tool to develop the nation. The requisites are desire to learn and a fine mentor to teach. Online learning activities facilitate more effective education and offer significant benefits over traditional methods. By the manipulation of technologies in creation of smart villages, internet banking, anytime and anywhere learning, etc. the hurdles that were faced by the people in rural areas are eased. But in recent times, factors have emerged which have strengthened and encouraged moves to adopt ICT's into classrooms and learning settings. The paper spotlights on all the points which contributes to the rural development in quality education which is the basic need of the society.

Index Terms: ICT, Women Education, Challenges, Social aims, Technology, Online learning, etc.

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1. ROLE OF ICT IN EDUCATION

In the age of innovation and productivity, acquaintance and technology has come to conquer a centre stage in national and international policy deliberations. In this scenario, it has been duly recognized that enactment and adoption of ICT in a nation at all levels, would certainly contribute and enhance its productivity, efficiency and growth.

ICT is an umbrella term that includes any communication device or application, encompassing radio, television, cellular phones, computers, etc. [1]. ICT is the technology required for information processing. Recently, the development of ICT gradually replaces the traditional teaching pedagogy.

The ICT for education program not only provides information on higher education but also provides, employment opportunities in various fields. For example: In school education of Tamil Nadu, There is a separate syllabus for moral class or life education it has included some vocation training classes like farming, vocational training of tailoring and weaving ,etc.[2].

Most of the countries across the globe address the issues such as education, healthcare, economic, and technological development as these are driving forces for national development of a country. It is observed that countries that have achieved high levels of economic growth in recent decades have done so in part because of the efforts they have made in developing and strengthening its human capital through their education systems [3]. Such effective conception, propagation and accumulations of knowledge and human capital development through effective educations systems are key drivers in technical progress, innovations and economic growth.

Education plays a significant role for the development because educated population are more creative and more respectful to the introduction of advances and technologies. So, they have greater involvement in civic activities and live a healthy life.

The information technology revolution has played key role in socioeconomic development of the world and it has occupied the key place at the heart of global economic growth over the last several decades [4].

By use of ICT we can keep students up-to-date with the syllabus. It is clear that ICT's offers opportunities not available previously to educators especially women. Using tools such as e-mail, video learning, audio learning, computer-conferencing, a very rich interactive and individualized learning environment can be created that allows learners to dictate their pace of learning.

Information and communication technologies (ICT) have become commonplace entities in all aspects of life. Across the past twenty years the use of ICT has fundamentally changed the practices and procedures of nearly all forms of endeavour within business and governance.

Within education, ICT has begun to have a presence but the impact has not been as extensive as in other fields. Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners.

The use of ICT in education lends itself to more student-centred learning settings and often this creates some tensions for some teachers and students. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important and this importance will continue to grow and develop in the 21st century. The various impacts of ICT on contemporary higher education and explores potential future developments.

The paper argues the role of ICT in transforming teaching and learning and seeks to explore how this will impact on the way programs will be offered and delivered in the universities and colleges of the future [5].

1.1 Challenges faced by students

Although ICT has the potential to improve education system of a country to a great extent, yet it is not the case in the developing countries. There are multiple issues and challenges confronting the implementation of ICT education in schools and educational institutions in these countries and the problems are much more magnified in case of schools located in remote villages and rural areas [6].

- **Lack of technical support:**
  Schools in rural area faces issues associated to technical know-how, absence of ICT service centres, and unavailability of trained technical personnel. Technical support professional are necessary to the continued capability of ICT use in a given school. Without clear technical support, much time and money may be lost due to technical cessations. One of the major hindrances to enhancing computer use in schools has been the lack of appropriate technical support.
- **Lack of reliable communication:**

Lack of reliable communication is hampering information and communication technology (ICT). Many students don't have internet access at home, or reliable cell phone services.

New technologies and increasing access to distance learning, telecommuting, and e-commerce show promise for changing power dynamics and providing new opportunities in distressed rural communities[7].

- **Lack of transport facilities and study material:**
  Extremely backward villages do not have their own schools and hence they need to educate their children in nearby villages or cities but due to lack of transport facilities children cannot travel far to come to school. Also children don't have proper textbooks of their current course [8].
- **Problem Faced in Rural Education in India:**
  Teachers of rural school in villages and small towns receive low income so there is possibility that teachers give less attention to children.

  Most of the school do not have proper infrastructure. So they do not get most of the facilities such as computer education sports education and extra regular activities.

  There are no proper transport facilities so children don't like to travel miles to come to school. There is no access to supplemental education [9].

1.2 Women Education

Girls are not only meant to learn household works but also gain knowledge about everything. Since India's independence, we have come a long way and the change is visible in the field of technology, lifestyle, development and adapting change in almost every sphere of life.

But there is still a long road lie ahead of the country to jump from the list of developing countries to be placed under the list of developed countries. The young brain is capable of grasping thing easily and for longer period of time, thus educating girls when they are young is very important.

This will change the way they see things, they will be capable enough to understand a problem and solve on their own [10].

Gender stereotyping in girl-child education seem to be a global phenomenon. In India, there is an abundance of "women entrepreneurs" who are capable of making their mark at the global level [11]. However, the awareness and communication facilities are missing drastically.

With the help of information communication and technology (ICT). We can change the scenario of women education in a country, as it helps in uplifting belief and faith in a female.

It is vital for all women's, of a country to be educated. This flair in women is developed by ICT. A woman can invigorate herself on her own; she will never need any assent to get educated. What she needs, is to get connected with the modern resources of ICT that are been introduced in the era.

Also, it is well said that "If a woman is strong country is strong, the whole nation is strong". This energy to make a nation strong is developed by ICT.

The major educational problem faced by girls, especially girls from rural areas, is that although they may be enrolled at the very beginning of the year, they do not always remain in school.

It is estimated girls dropout of school at a very early age. Girls are often taken out of school to share the family responsibilities such as caring for younger siblings, etc. [12].

But, this synopsis can be revamped by exerting gizmos of this age. ICT can help women's to get educated from home; it also helps them in empowering themselves and helps in keeping an eye on their ménage.

Also the major snag in women education is, Priority to son's education compared to daughter's education.

Also, if a family has to choose between educating a son or a daughter because of financial restrictions, typically the son will be chosen. Negative parental attitudes towards educating daughters can also be a barrier to a girl's education. This can be resolved by affixing importance of laws and human rights that are initiated by ICT.

As technology has ridden many of the hurdles spotted in education. Here are some more revived policies in women education.

   i.   Economic development and prosperity.
  ii.   Improved life.
 iii.   Choice to choose a profession of her [13].
 iv.   Increases access to education.
  v.   Demand for higher education in rural areas.
 vi.   Extends educational opportunities.

With the use of ICT a woman needs, not to worry about stipulating a specific career. This is resolved by viewing various professions going around the world and also by interacting different people around the globe.

Women's empowerment is not limited only for the Indian society. If we deliberate the global aspect in this regard we see that women are been given equal treatment in developed nation. If we take a recollection of history, we come to know that women have always been given secondary position in society , but the difference between men and women created by the Nature is but natural [14].

Recently, Women Wizards Rule Tech Programme was launched by NASSCOM (National Association of Software and Services Companies) to increase the number of women in senior levels in information technology (IT) industry, this programme was announced in march 2018 at NASSCOM diversity and Inclusion Summit in Chennai as joint Initiative by NASSCOM sector skills council and data security council of India [15].

2. WHY TECHNOLOGY IN EDUCATION?

Technology has become an integral part of our day-to-day life. The increasing usage of technology is the need of the hour but most part of rural India still not equipped with the same.

- **Creation of smart village:**
  India is a country of villages, where nation's development mainly depends on the progress of villages. Smart village is a concept adopted by Indian government as an initiative for the rural development. Creation of smart village includes providing facilities for education, proper medical facilities, employment, transportation and communication, empowerment of women, etc. In agricultural productivity also

technology has been involved, due to which life of farmers became much better. It saves their time and money both.

- **Internet Banking:**
  Using technology in banking sector, the payment facility and other services such as depositing withdrawing money, etc. became very easy and transparent.
  Poor people do not have the time to deposit and withdraw money from the bank branches due to remote location of villages [16]. It was costly for them to go bank branches as it leads to loss of manpower and resources. So it helps to avoid travelling cost for the people in rural areas.

- **Anytime & anywhere learning:**
  The pace of imparting knowledge is very fast with the help of technology. One can study any time with his determinations irrespective of whether it is day or night and irrespective of being in any part of the world. Mobile technologies and seamless communications technologies support 24x7 teaching and learning [17]. Internet supports thousands of different kinds of operational and experimental services one of which is online library which can be used to get plenty of data [18].
  Access to a variety of information sources:
     i.   access to a variety of information forms and types;
    ii.   student-centered learning settings based on information   access and inquiry;
   iii.   learning environments centered on problem-centered and inquiry-based activities;

- **Social aims of ICT in education:**
     i.   To encourage the learners to develop the appropriate social skills that are essential for co-operative and collaborate learning based around ICT's.
    ii.   To empower the disadvantages learners by ensuring sufficient access for those learners who have little out-of-school opportunities to use the technology.
   iii.   To facilitate better communication between the learners thereby promoting greater social understanding and harmony.
   iv.   To ensure equity among all learners by providing appropriate qualitative and quantitative opportunities to overcome social learning disadvantages [19].
    v.   Expansion of Provisions of basic education and training in other essential skills required by youth and adults [20].
   vi.   To move towards problems-based learning.
   vii.   To encourage equal opportunities to obtain education and information.
  viii.   To develop a system of collecting and disseminating educational information [21].

From the following figure-1, Information Communication and Technology (ICT) in rural development is a process of change, by which the effort of the people themselves are united.

The role of ICT in education simplifies life of students in rural areas.

The women are very dynamic personality of the society.

Using technology in education is a boon for all projects like creation of smart village and implementing internet banking facilities.

E-learning can be delivered anytime and anywhere and can provide flexible models [22].
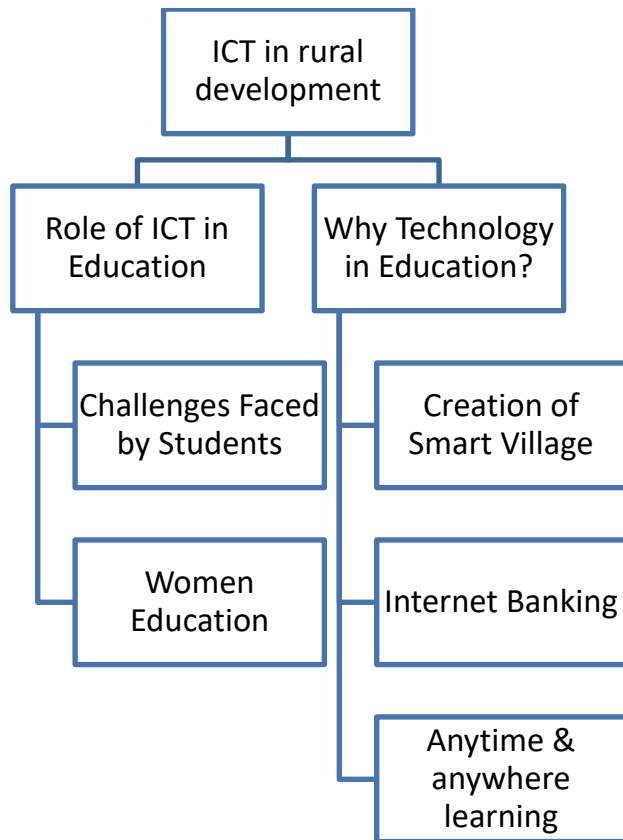
Fig.-1: ICT in rural development

From the following graph, it is clear that there is increase in Implementation of Information Communication and Technology (ICT). The graph is presented with years of development and percentage with Internet Usage, Literacy Rate and Employment. It is observed that, Internet Usage is rapidly increasing, also the literacy is swiftly escalating and employment is also proliferating.

Internet penetration in urban India is 64.84 percent, in rural India penetration was still 20.26 percent by December 2017 [23].

Presently, Tripura has highest Literacy rate in India, 94.65 percent. According to 2011 census, the National Literacy Rate was 74.04 percent [24].

In India, the employment rate measures the number of people who are actively with a job, presently employed persons are 29650 thousand [25].
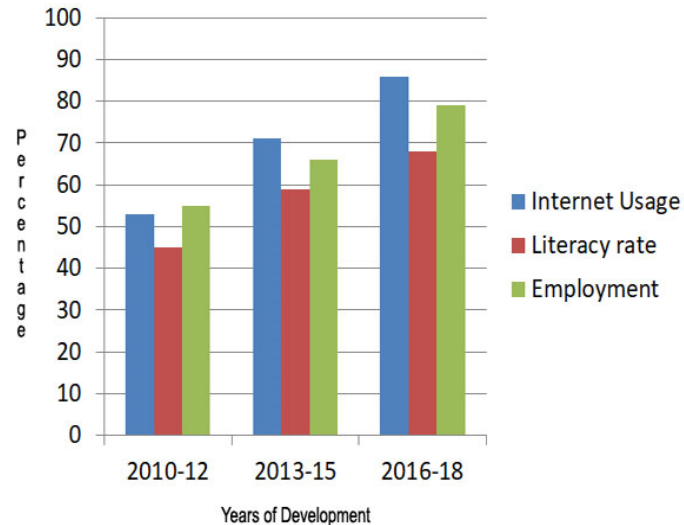

Fig-2: Increasing Implementation of ICT

3. CONCLUSION

In order to conclude we have tried to sought and explore the role of Information and Communication Technology (ICT) in education as we progress in this new era. We have enlightened educational conditions and environment of rural areas. There are various areas in which we must provide attention to enhance education in a nation.

"Educating a girl is educating the family and educating the family is educating the society".

Internet is a valuable source of knowledge. By providing online learning, challenges that were faced earlier may be resolved. Development of any society depends on its access to information and the same is applicable to rural areas too. The future scope is to harness the modern information and communication technologies for all.

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