



Review on Use of ICT among Rural Areas

Ritu, Dr. Ella Rani Dr. Vandana Verma

Ritu, Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana, India

Corresponding Authors: Dr. Ella Rani, Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana

Dr. Vandana Verma, Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana

Date of Submission: 02-09-2022

Date of Acceptance: 15-09-2022

ABSTRACT: The use of information and communication technology has attracted a lot of interest in recent years. (ICTs) to promote development although several of these programmes have given rural women access to women still encounter a variety of barriers while trying to utilize ICTs, despite having access to new knowledge and job prospects. This review paper examines the barriers facing women in agriculture and how ICTs are being used. This essay's conclusion reads, while the majority of ICT programmes promote the utilization of knowledge and fresh information for rural women, several are lack of access to supplementary sources of help and a service prevents them from using it. There are countless ICTs have the ability to give rural women new job options and to significantly improve efficiency and productivity in rural women's businesses. While ICTs can significantly contribute to rural empowerment women's access to, use of, and empowerment through ICTs are directly impacted by the strategic plan and operational priorities of the ICTs-using organization's organizational agenda. Boosting ICT activities as a result can significantly increase the power of rural women.

KEYWORDS: ICT Tools, Rural area, Constraints

I. INTRODUCTION

Development of rural areas and the country as a whole is greatly influenced by agriculture. The two fields of agriculture and gender are closely related. Compared to men, women are twice as likely to work in agriculture. Many women lead complicated lives that include juggling many different responsibilities. To take care of her family's requirements, the normal woman must do several roles at various times. Women are heavily involved in significant farm work and agricultural activities in rural areas. 60 to 80 percent of agricultural labour, including food production,

processing, and marketing, is performed by women. These women have utilized and managed natural resources, gathered food for their daily needs, etc. They work as farm workers and help out on family farms. They are faced with significant obstacles while trying to increase production in light of the diminishing availability of natural resources. With the aid of information and communication technology, these problems can be solved, all efforts to alter society depend on effective communication. The development of information and communication technology (ICT) has made it possible to collaborate, interact, and exchange information quickly, having a bigger positive impact on society. ICT refers to a broad range of technological instruments and resources used to produce, transmit, store, add value to, and manage information. ICTs do have a significant impact on knowledge and attitude transformation in rural communities by spreading a variety of information and recommendations. Additionally, it helps rural populations develop new skills and generates new job prospects as a result, many ICTs and their applications were experimented with in industries like agriculture, health, governance, financial services, education, and employment. Numerous of these initiatives amply demonstrate the ICTs' enormous potential for enhancing the effectiveness and efficiency of delivering pertinent information to rural populations. Despite the fact that these programmes have given rural women access to new knowledge and job prospects, studies have shown that there are still a number of barriers preventing them from fully utilizing the promise of ICTs. The fulfillment of the full potential of ICTs for rural women is now constrained by the persistent digital gap between urban and rural areas as well as between men and women. ICTs are a broad range of technology resources and instruments used to produce, store, manage, and add value to information. Telecommunications, radio and



television broadcasting, computer hardware, software, and services, as well as electronic media, are just a few of the segments that make up this industry. Understanding women's access to ICTs, usage of ICTs by them, access barriers, the impact of ICTs on agricultural productivity, and ultimately the empowerment of farm women is crucial if ICTs are to benefit women in agricultural production and challenge the current gender imbalances in rural livelihoods. ICT presents a chance to expand upon current offerings or to introduce new activities, services, and applications to rural areas. ICTs are

also a tool for raising awareness and providing feedback, allowing rural residents a voice in the socio-political life of the country. It helps to modify the rural way of life in both qualitative and quantitative ways. However, the benefits of ICTs have not yet materialized to the extent that was anticipated in rural regions, and rural residents, particularly the poorest of the poor, continue to live with only the barest of ICT facilities. The primary factor besides this is an inadequate ICT infrastructure in rural areas.

II. RURAL DEVELOPMENT AND ICT

Indian industry has undergone through many revolutions. The success story of the Indian IT industry has benefited only urban India. The rural India was deprived from this benefit. Although the primary resource for industry is from agriculture. In developing countries like India the concept of development linked up with the rural development. Also, the roads for transportations are not properly constructed. The government has taken the initiative to connect the India via roads. It can facilitate speedy, transparent, accountable, efficient and effective interaction between the public, citizens, business and other agencies. It was the situation when we want to send a letter or message, many days were required. Today, e-mail facility, social media have made it possible to cover a large distance in very small time. ICT as an enabler has broken all bounds of cost, distance and time. In rural areas, one cyber cafe is sufficient to make the rural citizens known to ICT. The ICT kiosk movement has been able to create a stir in local communities in terms of knowledge and know-how about the use of technology for accessing information and using it as a means to a better livelihood. The world is connected under one term globalization. So, rural areas must be provided training to make good entrepreneurs. The natural resources are available in plentiful quantity. The current era of globalization, marketization and increasing competitiveness

requires that every citizen should be resourceful to run their livelihood enterprises. ICT is the fastest medium for communication. From the perspective of information technology, India is most widely known for its impact on global markets in the software and services sectors. We can give opportunity to Indian rural markets to trade in foreign countries. ICT is a major tool to leverage the scheme for ensuring access to the target group of beneficiaries. The Information and Communication Technologies have facilitated the design of solutions to deliver government services for social development at the door step of villagers. While there is a strong link between access to ICT and development, it is not a panacea, but rather a powerful tool to tackle development challenges. A strong communication channel can be established with the help of mobile phones. Rural citizens can use the tollfree numbers to call and leave messages about any issue concerning their community and listen/ learn from messages left by others from the same community.

While implementing ICT, the first barrier is language. The information available on internet is in English as it is a world-wide accepted International language. So, education status is essentially needed to be improved. India is a prosperous nation in terms of resources. It may be then human resource, natural resources, etc.

Management is the ultimate solution for it.

Many industries can be developed in rural India like paper industry, handloom industries, etc. As such, the global ICT industry is fast changing as a result of emerging technologies, economic, social and business trends.

Connectivity is not available in most rural areas.

There are other problems too like electricity. We need to focus on this too because rural development is a very vast subject which covers all the socio-economic, cultural and technological development and that's what is the rural development. ICT does



not include only the Internet but a gamut of other tools which could be used individually or in convergence with each other.

Financial problems are faced by most of the rural families.

This is the root cause for poor standard of living. ICT platforms help in generating incomes through new ways of carrying out business, reducing cycle times or increasing productivity. Many government schemes are provided for those who want to start a new business, loan facilities are also available. The rural citizens should take benefits of such schemes.

To implement ICT, computer literacy in fact, technical literacy is also essential.

In business, entrepreneurs must not bring international branded products because the rural economy is not so strong. So, this mistake should be avoided.

Problems in establishing network:

This is a technical issue to establish a network. The first point is the large investments needed to establish a strong network along with infrastructure. To achieve the balance between rural and urban areas, communication is important. This communication is well established through internet. Access to the Internet as well as the telecommunications is confined mainly to the urban centers in India and the rural areas remain beyond the ambit of new technology. The facility of internet is not so costly to connect from one place to another. The rural area is neglected in this case. At start of the invention of mobiles and telephones, this technology was unknown to rural areas. One important reason is the prohibitive cost of connecting India's vast rural areas with telecommunications. Once an Internet connection is established in villages, it can serve as a multipurpose platform for imaginative entrepreneurs. The projects have not adequately transferred capabilities to rural areas. By bridging distances, telephony and the internet, which fall under a broader category known as Information and Communication Technologies (ICTs), allow people living in remote areas unprecedented access to resources and opportunities.

III. Review on ICT tools present in rural areas

According to Yadav et al. (2011), a variety of ICT tools are employed in the modern era for information transmission. These include radio,

television, mobile phones, the internet, and other media that may reach a large audience quickly and with little help from human labour. These ICT tools make the process of disseminating information highly time and money efficient. People no longer have to go as far apart due to the development of current ICT equipment.

Meera et al, (2004) suggested that there are now fewer physical barriers between individuals around the world because to the digitalization of the entire communication process from source to reception using ICT tools.

IV. Review on use of ICT by rural women

Extension personnel occasionally hold meetings, lectures, group discussions, seminars, workshops, and local training sessions for farmers utilizing ICT equipment including computers, pictures, and slides (Isife and Ofuoku, 2008).

Tandon (2009) found that 62% of respondents use a computer with internet connectivity on a daily basis, compared to 13% who use social networks or blogs, and no one had used e-conference facilities. The majority of respondents (76%) use a cell phone daily, compared to 43% of all respondents who use landlines daily.

ICTs have the power to address issues with farming community-marketing communication, technological requirements, marketing challenges, etc. The use of computers can speed up and simplify the processes involved in growing crops and marketing them (World Bank, 2011).

Ramakrishna (2012) reported that the majority of rural women (70 percent) had cable connection, followed by DTH and doordarshan connection, in a research on "Television viewing behaviour of rural women." 2.67 percent of rural women lacked access to television. Respondents showed a greater interest in entertainment programming, and the majority (71.23 percent) preferred popular serials above reality shows, music, and movies. They also regularly watched news (29.00%), agricultural (14.84%), sports programme (2.74%), and religious programming (37.90%). The majority of women watched television every day for up to an hour, and the most watched programmes were those that were entertaining.



V. Review on constraints using ICT's

Young people in rural areas are actively involved in using a variety of ICT technologies, including modern agriculture practises (Aker, 2011).

However, the realities on the ground show that young farmers in particular and all farmers in general have a variety of issues with the use of ICTs in agriculture (Shanthya and Elakkiya, 2017).

According to Meenambigati and Ravichandran (2004), the main obstacles faced by farm women when using media (Radio and Television) programmes were a lack of time (74.17 percent), the impact on children's academic performance (30 percent), a lack of awareness about media programmes and the difficulty of the subject matter (25.83 percent), and the inability to take notes (25.80 percent) in the case of farm broadcasts only. Furthermore, lack of location-specific, need-based, and engaging farm programming (61.77 percent), insufficient time (58.33 percent), and the inappropriateness of the time of farm telecast (31.67 percent) were the main challenges faced by farm women in the study-affecting television case (64.70 percent). Only in the case of television alone did the message seem comprehensive.

According to Amotaa's (2005) research, many rural areas in developing nations lack access to the fundamental telecommunications services that underpin important ICTs like the telephone and the internet.

Arokoyo and Orokoyo (2005) said that major obstacles include a lack of ICT infrastructure, unstable power supply, a high rate of illiteracy among information users (farmers), and low computer literacy among information providers. These obstacles severely restrict the use of ICTs in agricultural extension.

CONCLUSION

Looking back on this project, the overall outcome of results to be observed. This can be evaluated by looking at how well our objectives were met. Our first objective is to control the engine valve of an engine, select a linear actuator that meets specifications, and construct an electronic control system, deal with the design aspect of our project and were all almost achieved. More specifically, next objective, the electronic control system we constructed is able to read engine speeds from 0 to 3600 rpm and vary the valve timing depending on engine speed and operator inputs. However, our final objective, to obtain gains in horsepower, torque, and efficiency of 2% was not met because of not setting up in an

According to Vijayoragavan (2006), inadequate infrastructure, bad connectivity, and a lack of competent personnel to provide educational materials are the main barriers to internet adoption. Ramakrishna (2012) indicated that the top barriers to rural women watching television include low economic status (2.67 percent), illiteracy, low educational attainment, insufficient time (64.89 percent), fatigue from heavy workloads (24.44 percent), gender bias (20.89 percent), technical issues (2.89 percent), and gender bias (2.44 percent).

Youthful farmers (those between the ages of 15 and 24) are becoming more prevalent all across the world. Lack of access to knowledge and information is one of the main problems facing these rural youth (FAO, 2014).

There are two types of factors, Internal such as teachers, students and External such as infrastructure, leadership, and cost. Technology integration in education is not a new concept for educators, teachers, researchers and educational Institutions since advent of chalkboard and printing press, many developing and developed country have invested a huge amount on ICT integration in education, the new and emerging ICTs such as internet applications, video technology, various computer software, and CD ROMS have not just changed in technical nature but also in structural nature (Michael, 2010).

The digital divide between urban and rural areas of developing countries are critical factors, due to many reasons and causes such that the lack ICT in rural areas, for instance, lack of concentration, lack of coordination among rural schools (Mansotra 2009), high cost, infrastructure, human capacity, literacy level, cultural, attitudes and ignorance, students' lack of computer skills and knowledge, perceive difficulties of ICT integration in education. engine but theoretically it should be done. We are confident though that this objective of installing in an engine can be met if more time for testing and facilities is given. There is a lot we could say about the need for variable valve timing. This design is very realistic for the future of the automotive industry as well as our education.

REFERENCES

- [1]. Anotaya (2005). ICT and agricultural extension emergency issue in Trans in confereing agricultural technology in developing countries. In SF Adedoyin (Ed) Agril. Ext. in Nigeria, Adedoyinerin (Ed). agricultural extension society of Nigeria.



- [2]. Aker JC, Isaac M. 2010. Mobile Phones and Economic Development in Africa. *Journal of Economic Perspectives* 24(3), 207-232.
- [3]. Arokoya, T. (2005). ICTs application in Agril.Ext. service delivery. *Journal of agricultural extension in Nigeria*, 21 : 245 – 251.
- [4]. Food and Agriculture Organization. 2014. Youth and Agriculture: Key challenges and concrete solutions. Food and Agriculture Organization of United Nations, Rome, Italy. <http://www.fao.org/3/a-i3947e.pdf>.
- [5]. Isife, B. I. and Ofuoku, A.U. (2008), *Communication in Agricultural Extension and Rural Development: Methods and Concepts*. Owerri, Springfield Publication.
- [6]. Meena, J. and Seetharaman, R.N. (2004). Cable television viewing behavior of farmers and farm women. *IJEE*, 40 : 49 – 55.
- [7]. Meera, S.N., Jhamtani, A. and Rao, D.U.M. (2004). *Information and Communication Technology in Agricultural Development: A Comparative Analysis of Three Projects from India*. Agricultural Research and Extension Network (AgREN), Paper 135 (Sponsored by DFID, UK), Overseas Development Institute, London, UK.
- [8]. Ramakrishan H. (2012) Television viewing behavior of rural women. *Global research analysis*, 1: 35 – 36 on 15 may 2014.
- [9]. ShanthyaMS, Elakkiya S. 2017. Constraints Encountered by Famers in ICT Utilization – an Analysis. *International Journal of Agriculture Innovations and Research* 6(2), 346-347.
- [10]. Tandon, N 2009: Issues and challenges of climate change for women farmers in the Caribbean: The potential of ICT, *Networked Intelligence for development* 21 – 21. www.Network-edintelligence.com on Jan, 15 2014.
- [11]. Vijayaragavan, K. 2006.” Experiences of computer assisted and programmed Instructor (CAI) : Implication for agriculture Extension International conference on social science perspectives in agriculture research and Development, New Delhi: 218.
- [12]. Yadav, B. S.; Khan, I. M. and Kumar, M (2011). Utilization Pattern of Different Sources and Channels of Agriculture Information Used by the Fenugreek Growers. *Indian Res. J. of Ext. Edu.*, 11 (1): 44-49.
- [13]. World Bank. 2011. *ICT in Agriculture: Connecting Smallholders to Knowledge, Networks, and Institutions*. E-Source Book, Report Number 64605. <https://doi.org/10.1596/978-1-4648-1002-2>.