

# A Study of the Impact of Digital Innovations in Rural Development

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## ABSTRACT:

India is a multicultural, multi language and multi religion nation with complex financial conditions. The developing populace, lacking assets, and deferrals in execution of government approaches and projects have been a portion of the difficulties that have lead to inconsistent improvement in the general public. While a few people are rich and have numerous assets, others don't. The instructive arrangement of India likewise has been delayed to accomplish the set objective surrounded by different commissions and panels and plans propelled every once in a while. The main objective of this paper is to find out the impact of digital innovations in the rural development. The researcher has followed the empirical research and conducted survey among 287 respondents in Tamil Nadu through online by convenient sampling method. The collected data were analysed by using SPSS software. Mainly compound and multi bar charts barely used to analyse the responses of the respondent. Further it can be observed that the government has taken steps for the effectiveness in rural development schemes. The conclusion of the research is that digital innovations are playing an important role in the rural development of the Country.

**KEYWORDS:** Digital, Development, Rural, Government, Innovations, Technology

## I. INTRODUCTION:

**Evolution-** With the advent of the ICT, another pattern has risen on the planet which is in fact known as 'Computerized Divide'. All in all sense, computerized separate infers the hole among the individuals who approach advanced advances and the individuals who don't have such access. The utilization of the term isn't just constrained to some

evolved nations of the world. Be that as it may, it is turning out to be increasingly more risky in creating nations the same. At first, the term alluded to the holes in the responsibility for PCs. Be that as it may, presently the term is utilized not exclusively to get to the web yet by an entrance to ICT that the various fragments of society can utilize. In the most essential sense, the term advanced gap is the consistently developing hole between those individuals and networks who approach ICTs and the individuals who don't have it. The term prevalently alludes to the utilization of web innovation specifically. As media transmission progressively witnesses itself with instructive, social, money related and business openings; the networks which need access to ICTs end up falling a long ways behind the remainder of the general public. The web can possibly enable its clients with new abilities, new points of view and new chances. Those gatherings that stay confined from this innovation will be additionally isolated into the fringe of the standard open life.

**Government initiatives:** AADHAAR ENABLED PAYMENT SYSTEM (AEPS)- is a bank driven model which permits online interoperable monetary incorporation exchange at PoS (MicroATM) through the Business reporter of any bank utilizing the Aadhaar confirmation. NATIONAL MISSION ON EDUCATION USING ICT-The National Mission on Education through Information and Communication Technology (NMEICT) has been imagined as a Centrally Sponsored Scheme to use the capability of ICT, in instructing and learning process to serve all the students in Higher Education Institutions in whenever anyplace mode. MyGov-It is a one of a kind first-of-its-sort participatory administration activity including the regular resident on the loose. NREGAsoft imagines actualizing e-Governance across State, District and

three levels of Panchayati Raj Institutions. It engages the basic man utilizing the data innovation as a facilitator. PRADHAN MANTRI GRAMIN DIGITAL SAKSHARTA ABHIYAAN-PMGDISHA is a plan to make six crore people in country territories, across States/UTs, carefully educated, coming to around 40% of rustic family units by covering one part from each qualified family unit by 31st March, 2019. It plans to connect the advanced partition, explicitly targeting the country populace including the underestimated areas of society like Scheduled Castes (SC)/Scheduled Tribes (ST), Minorities, Below Poverty Line (BPL), ladies and in an unexpected way abled people and minorities. TARGETED PUBLIC DISTRIBUTION SYSTEM (TPDS)- The Government of India propelled the Targeted Public Distribution System (TPDS) with center around poor people.

**Current trends:** Despite the developing number of individuals who own a PC and have Internet access, the vast majority in the creating nations have little chance and reasonableness to interface with the web and accordingly are unconscious of the financial advantages and the upgrade to great administration that ICT can bring. Additionally, among creating accomplices there is still a lot of incredulity towards ICT and fitting methods for improvement in locales, where networks even do not have the most fundamental administrations. Absence of access offices, for example, PCs and availability in helpless networks and underestimated regions: The expense of PCs is still past the buying intensity of most of the people in creating nations. The web is frequently dreadfully costly to be available to conventional individuals. The language boundaries in utilizing Internet: Language obstructions keep individuals from acquainting themselves with advantages of Internet based data, assets that perpetually require a capacity to comprehend worldwide language, particularly English. Since, the vast majority of data accessible on the NET is English. Thus, a great many people in rustic districts can't peruse and see most Internet content that is accessible. Another factor is the high pace of absence of education among individuals living under destitution. Absence of properly bundled data items in neighborhood language.

**Factors affecting:** IT has affected the economy and lives of individuals over the world. In India its advantages are starting to be seen and the effect of these advantages is making extraordinary change. It is additionally evident that the utilization of computerized advancements on the planet has improved individuals' everyday life as well as

separated the world into data rich and data poor, for example the data hass and the poor. The inconsistent access to data and correspondence innovations has prompted a gigantic gap carefully. In spite of the fact that India has been one of the rising superpowers in IT, the advantages have been strikingly moderate, especially in rustic and remote zones. Other than financial elements, geographic, instructive and attitudinal variables have been a portion of the difficulties for the legislature while presenting IT arranged projects. Despite noteworthy teledensity there still exists a separation among provincial and urban zones that should be crossed over. While the urban teledensity surpasses 15 percent, the provincial infiltration is about 1.5 percent. One of the prime worries of the legislatures in creating and creating universes has consistently been to guarantee the openness and accessibility of data and open administrations absent a lot of problem.

**Comparison: India and China** are disagreeable countries, share a typical fringe, and have various types of government. The world can't overlook India and China with practically 40% of the total populace, with developing white collar classes (bigger than most countries) that are significant shoppers in the worldwide market just as progressively significant worldwide makers, and with yearnings to super power status, these two countries are powerhouses. This is as evident in data and correspondences innovation (ICT) all things considered in vital or segment terms. Despite the fact that these two adjoining nations have altogether different political and monetary frameworks, both have doled out high need to data innovation (IT) and the Internet. Almost certainly, these new advances will come to assume a vital job in their inward turns of events and their relations with the remainder of the world. Be that as it may, the job each allots to ICT advancement inside their fringes is unmistakable. These distinctions can be considered as a tremendous cross national normal trial, revealing insight into Internet dissemination and improvement when all is said in done, and the relative qualities and shortcomings of every country's methodology.

**Kerala-** The State of Kerala in the Indian association is described by various critical financial, modern and political idiosyncrasies. These incorporate; entomb alia, the elevated level of in fact qualified and gifted labor, close to full proficiency rate, amazingly significant level of NRI populace and significant level of remote settlements, extremely significant levels of social turn of events and expectations for everyday comforts practically identical with cutting edge

nations, high PC entrance, most noteworthy phone power in the nation, 100 percent computerized availability and so on to give some examples. A huge system of smaller scale fund establishments advanced, either by the legislature or by private associations, is another positive element most definitely. Recently, in December 2007 Kerala has become the primary State in the whole nation to accomplish complete financial status or full monetary consideration. Regardless of these ideal highlights, there exists high degree for additional progression in regard of modern advancement all in all, and Rural Development specifically, given the high joblessness rate particularly among the informed. In the wake of Information and Communication Technology upheaval clearing over the world, the above highlights of Kerala economy makes it the perfect area to use its tremendous and extraordinary socio-social and information framework for utilizing the colossal capability of ICT.

#### OBJECTIVES:

The general objective of this study is to determine the impact of digital innovations in rural development. The specific objectives are;

1. To measure the percentage of Satisfaction of the rural people in implementing the Digital innovations in rural areas.
2. To find out the level of awareness of rural people on the digital innovations in the rural area.
3. To measure the level of support of rural people on the statement that the digital innovations is playing an important role in the rural development of the country.

#### II. REVIEW OF LITERATURE:

Talks about the job of data and correspondence advancements for provincial networks. Features the elements keeping rustic networks from receiving the rewards of data and correspondence advances and mechanical developments to get to them. Characterizes people group data frameworks and records chosen fruitful models outside India. (Sood and Saxena 1998)

Regardless of the restrictions in essential foundation and low-level infiltration of data innovation in India, in excess of 50 grassroots ventures are utilizing present day ICTs to support provincial networks. Portrays chosen network ventures in India. Likewise distinguishes the bottlenecks in, potential answers for and perceptions of the activities of rustic tasks. (Räisänen and Tuovinen 2011) Reasons that making data rich social orders is a key component

of destitution decrease and feasible turn of events. Network organize focuses can assume a key job in meeting the financial desires of provincial networks by effectively tending to the "eight Cs" of achievement in the advanced age: availability, content, network, trade, limit, culture, co-activity and capital. (Sharma 2001) In his exploration article entitled Information and Communication Technology Applications in Development: India as a good example for other creating nations examined that India presents a genuine case of the utilizations of data and correspondence innovation (ICT 2010) for other creating nations. Presents contextual investigations of three state-supported and two corporate activities in India managing ICT applications. (Manushi and Manushi 2018) In the E-Seva e-administration venture in Andhra Pradesh; the online ticket booking office at Indian Railways; online understudy advising in instructive organization; the E-choupal data administrations for ranchers gave by Indian Tobacco; and telemedicine at Apollo Hospitals for encouraging conveyance of value social insurance administrations to individuals in remote zones. Finishes up with proposals on strategy perspectives to be considered by other creating nations. (Raina and Das 2011). Deduces in their examination study entitled "Transformative Impact of ICT: Change stories from country India" that ICT is presently perceived as an innovative device which can fill in as a synergist mediation in regard of changing the lives and jobs of provincial families. (Kumar 1998) The financial and pay isolates among urban and rustic zones can be beaten distinctly by the innovative up-degree of provincial callings. The investigation gives instances of the transformational job of ICT in a wide scope of provincial callings. For instance, high quality anglers going out into the sea in a sailboat would now be able to convey a mobile phone with GPS information on the area of fish sandbars and data on wave statures at various good ways from the shore line. (Singh 2001) The Village Knowledge Center or Gyan Chaupal (VKC 2000) gives data on clean and phytosanitary measures and Codex Alimentarius guidelines of sanitation, with the goal that Salmonella and different diseases can be kept away from. (Anooja 1982) Information and Communication Technologies and the Effects of Globalization: Twenty-First Century "Advanced Slavery" for Developing Countries- - Myth or Reality? The examination analyzes the ICT insurgency and the idea of globalization as they impact creating nations. Globalization as one reason for conceivable enlarging of the hole between poor people and the rich countries was

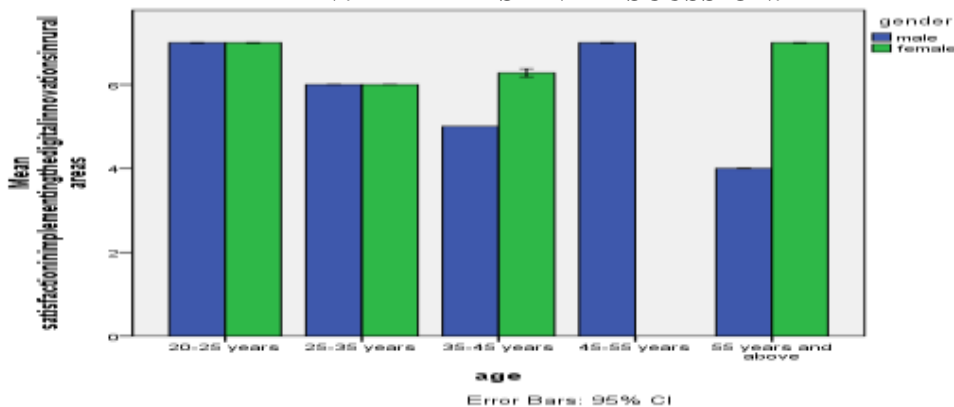
analyzed and the rising idea of "advanced subjection" was painstakingly assessed. (Lubana2018) The wide hole in accessibility and utilization of ICTs over the world and the impacts ICTs apply on globalization to the detriment of creating nations were painstakingly inspected and proposals and essential approaches were offered for creating nations to jump frog the industrialization arrange and change their economies into high worth included data economies that can contend with the propelled nations on the worldwide market. This is the reason it is significant for Africa, all in all, and Nigeria, specifically, to know about the suggestions, plan to stay away from the most advising outcomes and get ready to address its difficulties. (Kruppenbacher2009) The investigation presumes that the techniques and progress of the distinctive existing models of data and correspondence innovation use for wide based turn of events and financial development in India. It will inspect the job of corresponding changes in government organization and approaches.(Kapur) The emphasis is predominantly on the rustic economy, where the formative needs are the best, and the utilization of ICTs presents the most difficulties. It analyzes the idea of advantages in territories, for example, instruction, wellbeing, showcase proficiency, and fair investment, the channels through which effects can be acknowledged, and the functional methods for acknowledging expected advantages, including hierarchical developments and government strategy just as auxiliary changes. (Anooja and Vivekananda Global University) Distributed an examination article entitled "Broadband administrations in Rural Areas" presumes that The telecom division has kept on enlisting powerful development and has risen as a may segment driving India's financial advancement. The approach of empowering more prominent rivalry

has yielded unmistakable advantages and energized huge venture and development joined by innovative changes and improvement in nature of administration This segment is currently on the way of further development with an extension in rustic communication and broadband inclusion.(Sundararaman and Ved) In spite of the fact that the nation has expanded its proficiency rate to a urging 65.38 percent as indicated by the 2001 registration, all the more should be finished. The legislature has made urging steps to improve the lives of ordinary citizens through a few IT-situated tasks. (Dutta) Distributed an exploration article entitled "Data correspondence innovation for country zones". In this paper, an endeavor is made to introduce the significance of ICT, activities on utilization of ICT for rustic regions, the difficulties that are to be looked in actualizing the ICT based arrangements.(Mehta)

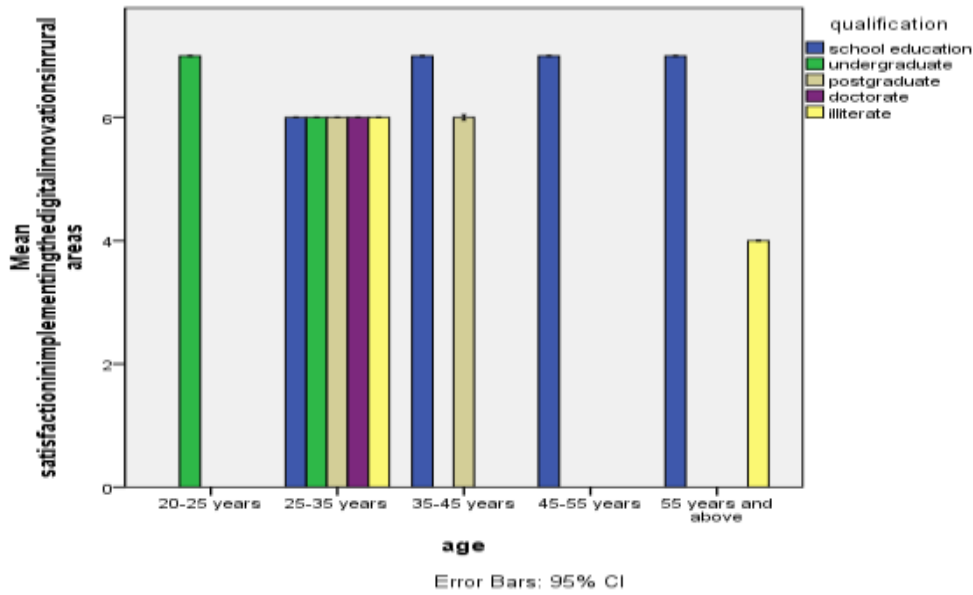
### III. METHODOLOGY:

Since public opinions might be collected through online surveys. The suitable research method is empirical research. Convenient method of sampling has been applied to collect responses from 287 respondents in and around the people from tamilnadu through online. The Independent variables are age, gender, educational qualification and occupation. The dependent variables are to measure the percentage of Satisfaction of the rural people in implementing the Digital innovations in rural areas, level of awareness of rural people on the digital innovations in the rural area and to measure the level of support of rural people on the statement that the digital innovations is playing an important role in the rural development of the country . The statistical tool used by the researcher is SPSS analysis in graphical representation.

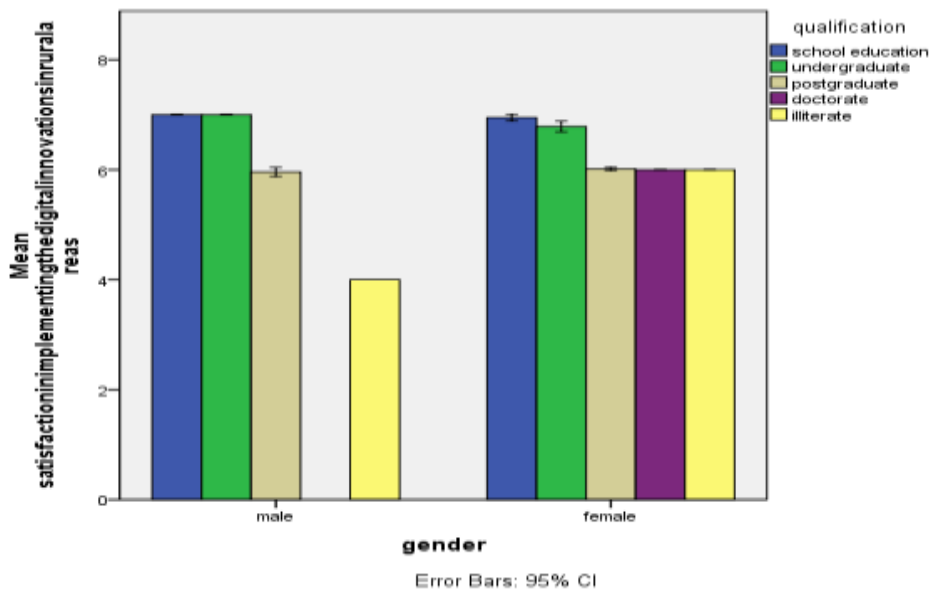
### IV. TABLES AND DISCUSSION:



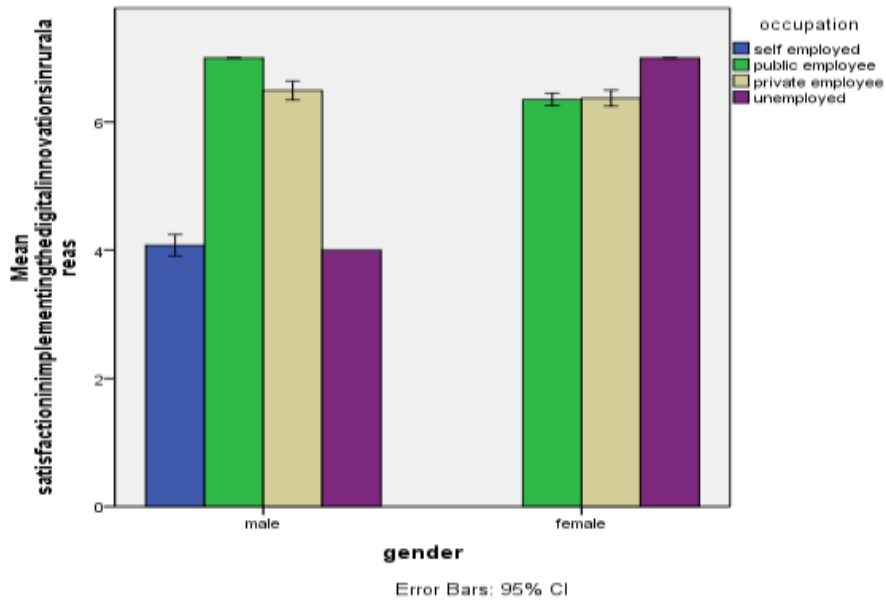
The Above graph shows the age distribution based on the gender and their level of satisfaction in implementing the digital innovations in rural areas.



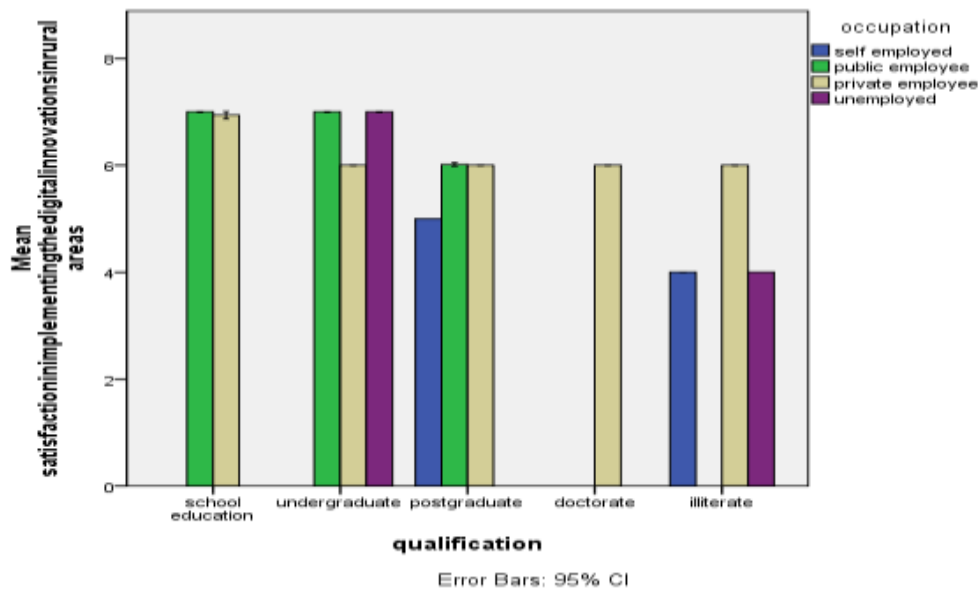
The Above graph shows the age distribution based on the qualification and their level of satisfaction in implementing the digital innovations in rural areas.



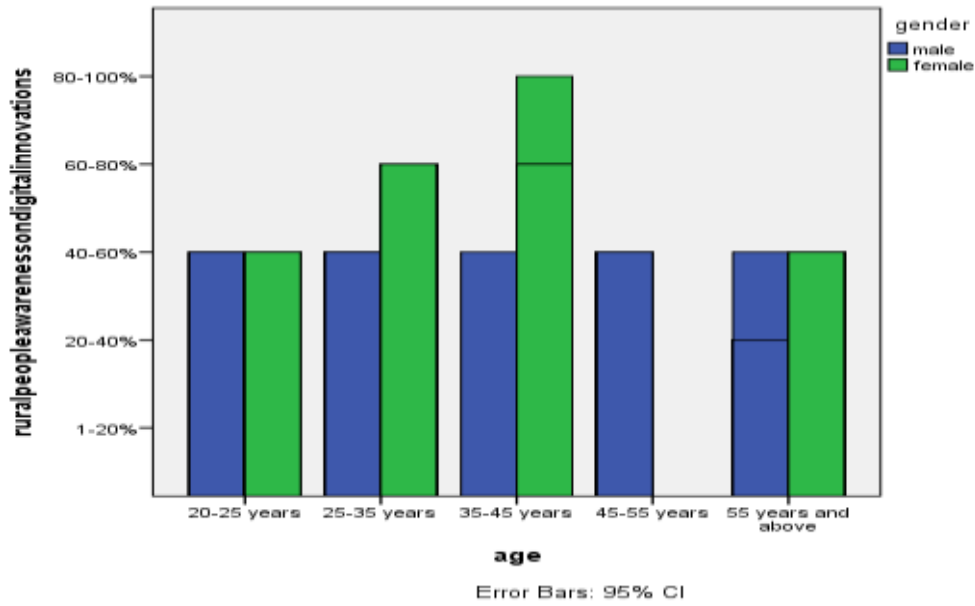
The Above graph shows the gender distribution based on the qualification and their level of satisfaction in implementing the digital innovations in rural areas.



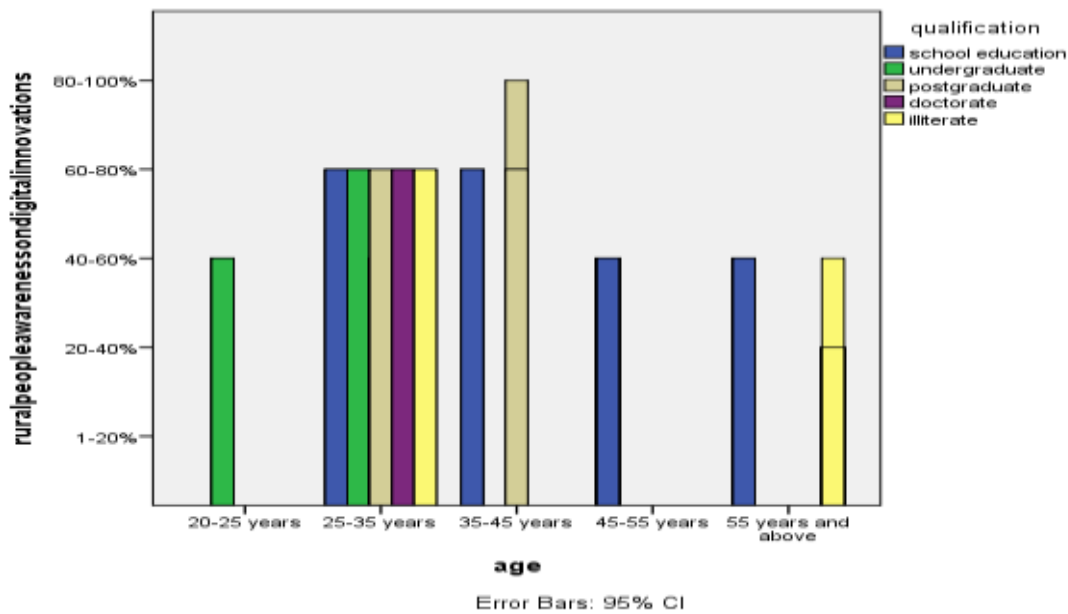
The Above graph shows the gender distribution based on the occupation and their level of satisfaction in implementing the digital innovations in rural areas.



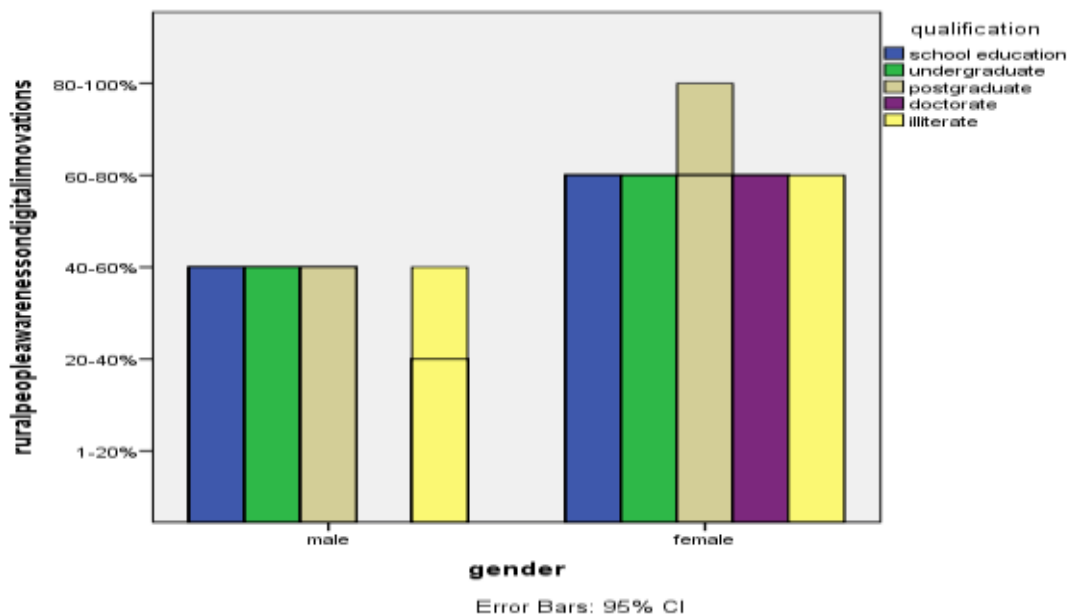
The Above graph shows the educational qualification distribution based on the occupation and their level of satisfaction in implementing the digital innovations in rural areas.



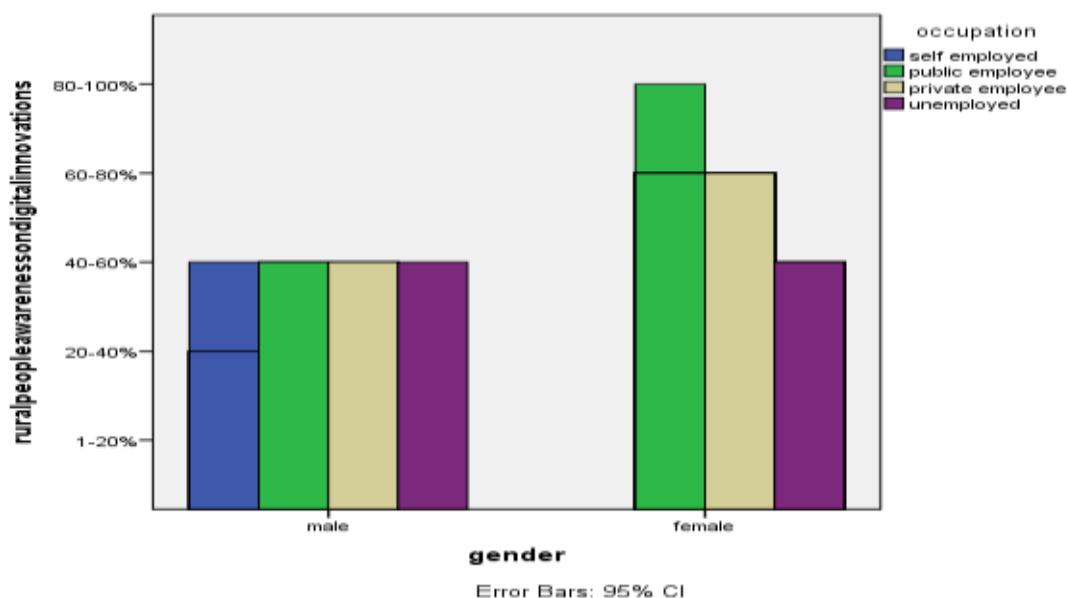
The Above graph shows the age distribution based on the gender and the awareness of people on the digital innovations implemented in rural area.



The Above graph shows the age distribution based on the qualification and the awareness of people on the digital innovations implemented in rural area.

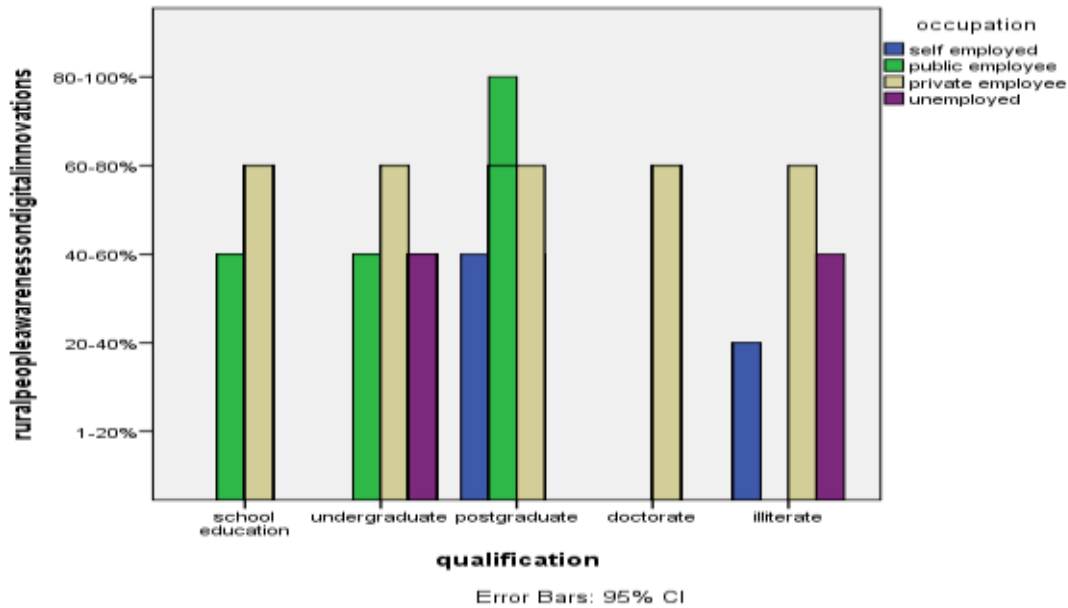


The Above graph shows the gender distribution based on the qualification and the awareness of people on the digital innovations implemented in rural area.

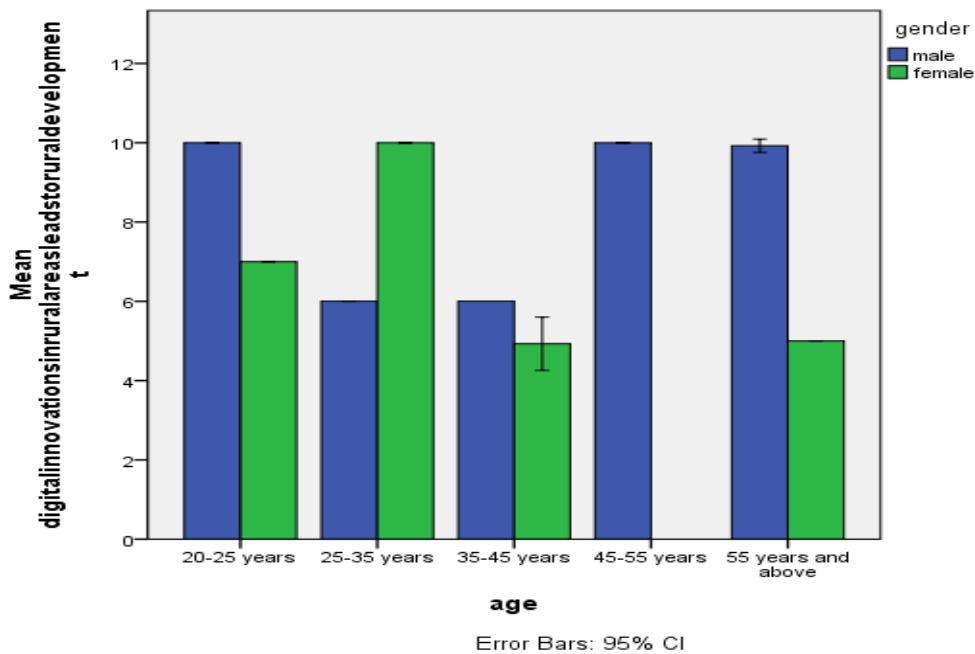


The Above graph shows the gender distribution based on the occupation and the awareness of people on the digital innovations implemented in rural area.

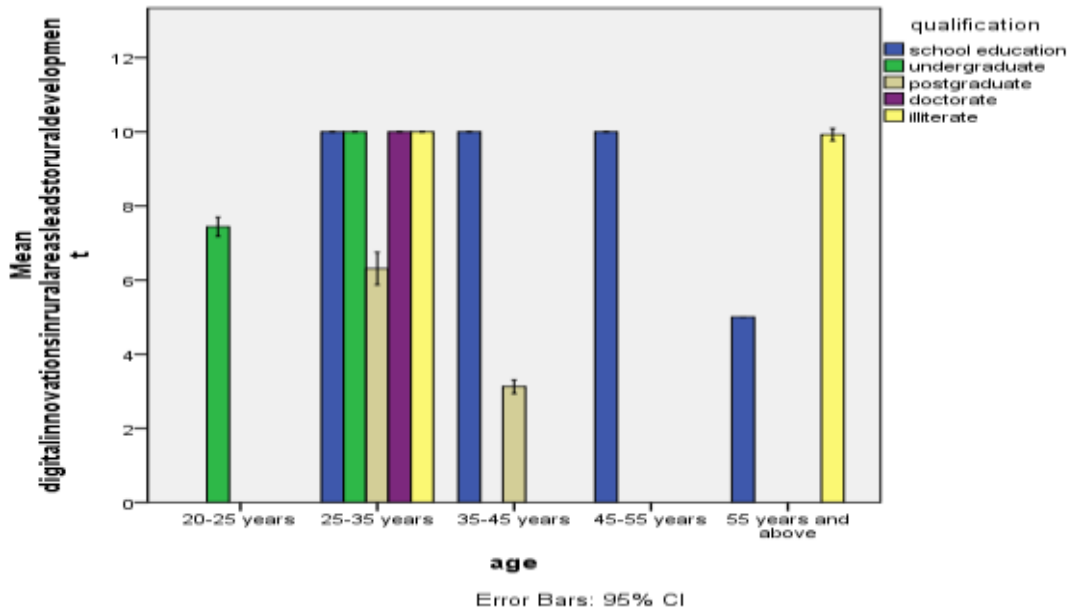




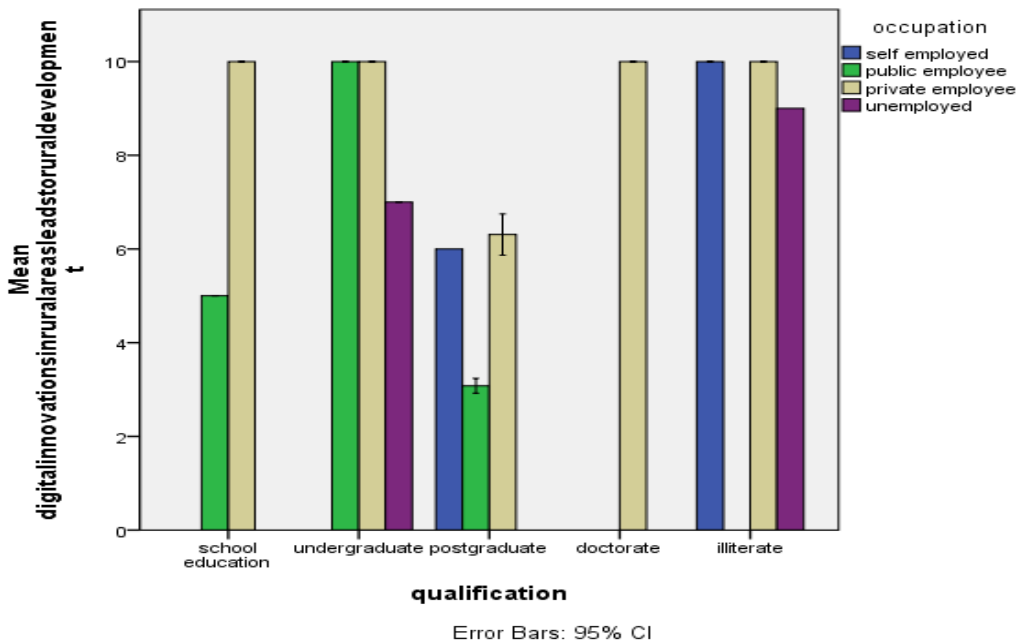
The Above graph shows the qualification distribution based on the occupation and the awareness of people on the digital innovations implemented in rural area.



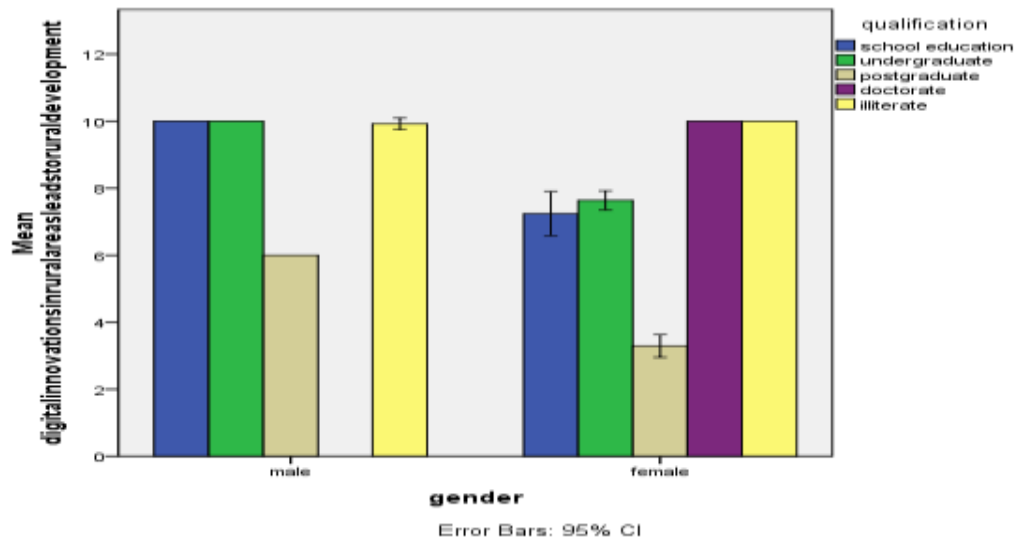
The Above graph shows the age distribution based on the gender and to know whether the digital innovations in rural areas contributes in the rural development.



The Above graph shows the age distribution based on the qualification and to know whether the digital innovations in rural areas contributes in the rural development.



The Above graph shows the qualification distribution based on the occupation and to know whether the digital innovations in rural areas contributes in the rural development.



The Above graph shows the age distribution based on the gender and to know whether the digital innovations in rural areas contributes in the rural development.

### V. RESULT:

In **figure 1**, all the respondents who are between the age of 20 to 25 years and male respondents between 45-55 years are satisfied with 70% rating and the respondents between 25 to 35 years given 60% rating and the male respondent between 45 to 55 years and the female respondent between 55 years and above gave 70% rating on the satisfaction in implementing the digital innovations in rural area. The male respondents between 35 to 45 years 50% rating and remaining male respondents about the age of 55 years are satisfied with 39%, the female respondents between the age of 35 to 45 years are satisfied with 62% in the implementation of digital innovations in rural area.

In **figure 2**, all the respondents between the age of 25 to 35 years are satisfied with 60% and the school educated respondents between the age of 35 to 55 years and above are you satisfied with 70% and the undergraduate respondents between the age of 20 to 25 years are satisfied with 70% and the post graduate respondent between the age of 35 to 45 years are satisfied with 60% and the remaining respondent was illiterate and between the age of 55 years and above are being satisfied with 40% in implementing the digital innovations in rural area.

In **figure 3**, the Post graduate male and female respondents are satisfied with 60% and the school educated male and female respondents are satisfied with 70% and the undergraduate respondents are satisfied with 70% satisfied,

undergraduate female respondents are satisfied with 68% and the doctorate and illiterate female respondents with the Post graduate female respondents are satisfied with 60% and the remaining illiterate male respondents are satisfied with 40% in the implementation of digital innovations in rural areas.

In **figure 4**, the private employees of male and female are satisfied with 70% and the unemployed female respondents with the public employee male respondents are satisfied with 75% and the self-employed with the unemployed male respondents are satisfied with 40% in the implementation of digital innovations in rural areas.

In **figure 5**, all the private employees except the school educated are satisfied with 60% where as the private employees who are school educated are satisfied with 65%, the public employees who are school educated and undergraduate are satisfied with 70% and the Post graduate public imply are satisfied with 60%, the unemployed and self-employed illiterate respondents are satisfied with 40%, the self-employed post graduate respondents are satisfied with 50% in the implementation of digital innovations in rural areas.

In **figure 6**, all the male respondents in all age groups stated that 40 to 60% of the rural people are aware of the digital innovations implemented in the digital area. The female respondents between the age of 20 to 25 years and 55 years and above also stated that 40 to 60% of rural people or aware of the digital innovations whereas the female respondents between the age of 25 to 35 years given 60 to 80% and the remaining female respondents about the age of 35 to 45 years have given 80-100 percentage of the rural people are

aware of the digital innovations implemented in rural areas.

In **figure 7**, all the respondents between the age of 25 to 35 years had given 60 to 80% and also the school educated respondent between the age of 35 to 45 years also gave 6 to 80% and the remaining school educated respondents between the age of 45 years and above with this under graduate respondent between the age of 20 to 25 years gave 40 to 60%, the Post graduate respondent between the age of 35 to 45 years had stated that 80-100 percentage of the rural people are aware of the digital innovations implemented in rural areas.

In **figure 8**, all the female respondents of various educational qualifications except the post graduate respondents have stated that 60 to 80% and the remaining female respondents were post graduate and stated that 80-100 percent of the rural people are aware of the digital innovations implemented in rural areas. Among the male respondents all the respondents despite various educational qualifications stated that 40 to 60% of the rural people are aware of the digital innovations implemented in rural areas.

In **figure 9**, All the male respondents of various occupations stated that 40 to 60% of the rural people at aware of the digital innovations limited in rural areas and the female respondents were public employed gave 80-100% and the private employees of the respondents aged 60 to 80% and the remaining female respondents were unemployed gave 40 to 60% of the rural people are aware of the digital innovations implemented in rural areas.

In **figure 10**, all the private employees have stated that 60 to 80% of the rural people or aware of digital innovations implemented in rural areas. The school educated public employees and the under graduate Public employees, unemployed and graduate respondents and the Post graduate self-employed respondents have stated that 40 to 60% of the rural people are aware of the digital innovations implemented in rural areas.

In **figure 11**, all the male respondents between the age of 20 to 25 years, 45 years and above have completely supported, and the male respondents between the age of 25 to 45 years have supported 60% that digital innovation is playing an important role in the rural development of the country. Among the female respondents the respondents between the age of 22 to 3 years supported 70%, the female respondents between the age of 25 to 35 years supported completely and the remaining respondents between the age of 35 to 45 years and 55 years and about supported people saying that the digital innovations are playing an

important role in the rural development of the country.

In **figure 12**, all the school educated respondent between the age of 25 to 55 years have supported completely, the illiterate respondents between the age of 25 to 35 years and 55 years and above, with the other responsibilities of 25 to 35 years it up the post graduate respondent also completely supported on the statement that the digital nations in rural areas is leading to the rural development. The undergraduate respondents between the age of 20 to 25 years supported 75%, The post graduate respondents between the age of 25 to 35 years supported 64% and the remaining postgraduate respondents between the age of 35 to 45 and supported 30% and the school educated respondents who are above the age of 55 years supported 40% on the statement that the digital innovations is playing an important role in the rural development of the country.

In **figure 14**, the school educated and they graduate and illiterate male respondents with the doctorate and illiterate female respondents have completely supported the statement, the Post graduate male respondents had supported 60% and the remaining post graduate respondent female had supported 30% the undergraduate female respondents supported 70% and the school educated female respondents have supported that 70% on the statement that the digital innovation is playing an important role in the rural development of the country.

## VI. DISCUSSION:

In figure 1 all the respondents between the age of 20 to 25 years and 25 to 35 years in spite of their gender are satisfied with 70 percent and 60 percent respectively with the implementation of digital innovations in rural areas.

In figure 2, all the respondents between 25 to 35 years in spite of their various educational qualifications all are satisfied with 60% in the implementation of digital innovations in rural areas.

In figure 3, all the school educated respondents of both male and female or satisfied with 70% and the Post graduate respondents are satisfied with 60% in the implementation of digital innovations in rural areas.

In figure 4, all the private employees in spite of their gender are satisfied with 65% in the implementation of digital innovations in rural areas.

In figure 5, all the private employees except the school educated way the other respondents in other occupations are satisfied with

60% in the implementation of digital innovations in rural areas.

In figure 6, it is surprising to see that all the male respondents despite various age groups are stating that 40 to 60% of rural people are aware of the digital innovations implemented by the government.

In figure 7, all the respondents between the age of 25 to 35 years despite various educational qualifications have stated that 60 to 80% of rural people are aware of the digital innovations implemented by the government in rural areas.

In figure 8, all the male respondents despite various educational qualifications have stated that 40 to 60% of rural people are aware of digital innovations.

In figure 9, all the male respondents despite various occupations have stated that 40 to 60% of rural people are aware of digital innovations implemented by the government.

In figure 10, it is surprised to see that all the private employees despite various educational qualification have stated that 60 to 80% of rural people are aware of the digital innovations implemented by the government in rural areas.

In figure 11, All the male respondents of all age groups except 25 to 45 years have completely supported the statement that the digital innovations in rural areas is leading to rural development.

In figure 12, all the respondents between the age of 25 to 35 years despite various educational qualifications except the respondents who are Post graduate have completely supported that the digital innovations in rural areas is leading to the rural development.

In figure 13, All the private employees despite various educational qualifications except the post graduate respondents have completely supported the statement that the digital innovations in rural areas is leading to rural development.

In figure 14, the illiterate respondents despite their gender and the doctorate female respondents with the school educated and undergraduate male respondents had completely supported the statement that digital innovations are playing an important role in rural development.

## VII. CONCLUSION:

The extension for the progression in Rural Development in the state is very huge, taking into account the extremely calculable by and large accomplishments of the state in receiving and actualizing different ICT activities, notwithstanding the low per capita salary and impressive money

related requirements that it faces. Data and Communication Technology (ICT) can possibly understand the fantasies of a perfect state where the resident government relationship is practical and effective, situated towards appropriate financial worries of the general public. With the utilization of ICT, one can overcome any barrier among urban and country India and furthermore build up the entire society.

## REFERENCES:

- [1]. Anooja, A. "Digital India with E-Commerce Revolution in Rural India: Transform India Digitally and Economically." *Engineering International*, vol. 3, no. 2, 2015, p. 57, doi:10.18034/ei.v3i2.771.
- [2]. Anooja, A., and Vivekananda Global University. "Digital India with E-Commerce Revolution in Rural India: Transform India Digitally and Economically." *Engineering International*, vol. 3, no. 2, 2015, pp. 57–64, doi:10.18034/ei.v3i2.190.
- [3]. Dutta, Arijit. "Evolution of Digital Literacy Project in Rural India." 2017 IEEE Integrated STEM Education Conference (ISEC), 2017, doi:10.1109/isecon.2017.7910239.
- [4]. Kapur, Vinod. "Pioneering Micro-Entrepreneurship Through Poultry Breeding and Distribution in Rural India (Innovations Case Narrative: Keggfarms)." *Innovations: Technology, Governance, Globalization*, vol. 3, no. 1, 2008, pp. 37–51, doi:10.1162/itgg.2008.3.1.37.
- [5]. Kruppenbacher, Viktoria. "Kapitel 9: Digital Sustainable Innovations in Rural Areas." *Nachhaltigkeit Und Digitalisierung*, 2019, pp. 213–31, doi:10.5771/9783748903192-213.
- [6]. Kumar, Rajesh. "'Rural Informatics': Use of Information and Communication Technologies for the Rural Poor – From Digital Divide to Digital Opportunity in Rural India." *Media Asia*, vol. 39, no. 4, 2012, pp. 183–90, doi:10.1080/01296612.2012.11689936.
- [7]. Lubana, Ekdeep Singh. "A Novel Methodology for Using Digital Cameras to Calculate Spectral Parameters." 2017 IEEE Technological Innovations in ICT for Agriculture and Rural Development (TIAR), 2017, doi:10.1109/tiar.2017.8273706.
- [8]. Manushi, and Manushi. "Rural India in the Digital Age." *Research Ethics in the Digital Age*, 2018, pp. 95–99, doi:10.1007/978-3-658-12909-5\_8.

- [9]. Mehta, Balwant Singh. “Capabilities, Costs, Networks and Innovations: Impact of Mobile Phones in Rural India.” SSRN Electronic Journal, doi:10.2139/ssrn.2259650. Programmes In India. Prabhat Prakashan.
- [10]. Raina, Rajeswari S., and Keshab Das. Inclusive Innovation: Evidence and Options in Rural India. Springer Nature, 2020.
- [11]. Räsänen, Jaana, and Tero Tuovinen. “Digital Innovations in Rural Micro-Enterprises.” Journal of Rural Studies, vol. 73, 2020, pp. 56–67, doi:10.1016/j.jrurstud.2019.09.010.
- [12]. Sharma, Nomita. “Rural Innovations in India: Cause and Benefits.” SSRN Electronic Journal, doi:10.2139/ssrn.2374844.
- [13]. Singh, Sumanjeet. “Digital Divide in India.” Digital Economy Innovations and Impacts on Society, 2012, pp. 106–30, doi:10.4018/978-1-4666-1556-4.ch008.
- [14]. Sood, Saurabh, and Niti Saxena. “Moving Beyond Digital Literacy and Towards E-Governance in Rural India.” Proceedings of the Special Collection on eGovernment Innovations in India - ICEGOV '17, 2017, doi:10.1145/3055219.3055243.
- [15]. Sundararaman, T., and Rajani Ved. “Innovations in the Organization of Public Health Services for Rural and Remote Parts of India.” Oxford Scholarship Online, 2018, doi:10.1093/oso/9780199476084.003.0007.
- [16]. Ravindra, Khaiwal, et al. “Water Uses, Treatment, and Sanitation Practices in Rural Areas of Chandigarh and Its Relation with Waterborne Diseases.” Environmental Science and Pollution Research International, vol. 26, no. 19, July 2019, pp. 19512–22.
- [17]. Satyanarayana, Gurrām, and H. S. Madhusudana. Rural Development and Poverty Alleviation in India: Policies and Programmes. 2012.
- [18]. Segall, Malcolm. “District Health Systems in a Neoliberal World: A Review of Five Key Policy Areas.” The International Journal of Health Planning and Management, vol. 18 Suppl 1, Oct. 2003, pp. S5–26.
- [19]. Selvarajan, E., and R. Elango. Rural Development Programmes and Externalities: The Report of the Project Funded by Planning Commission, Government of India, New Delhi. 2004.
- [20]. Team Prabhat Prakashan. Government Schemes, Missions, Campaigns and