Implementation of E-Governance: Issues and Challenges

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Abstract

Development of ICT has lead to the transformation of how governments functions and provides its services to its citizens. In most of the developed countries e-governance has been implemented and exclusively used. In the light of this, Government of India has come up with an very ambitious programme Digital India with the tag line "A programme to transform India into a digitally empowered society and knowledge economy" which aims at transparent governance, saving time in providing services to its citizens, reduction in corruption, convenience, empowering citizens and economic growth. One of the nine pillars of Digital India is e-Governance. Electronic governance or e-governance is the application of information and communication technology (ICT) for delivering government services, exchange of information communication transactions, integration of various stand-alone systems and services between government-to-citizens (G2C), government-to-business (G2B), government-to-government (G2G) as well as back office processes and interactions within the entire government framework. This paper aims at study of issues and challenges in implementing e-Governance in India in general and Karnataka in specific by conducting small survey in few of the villages nearby to the IT city - Bangalore. This research paper highlights the main challenges related to the implementation of e-Governance in India and Karnataka.

Key Words: digital India, knowledge economy, ICT, e-governance, G2G, G2B, G2G.

JEL classification: G2G, G2B, G2G.

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Introduction

Digital India is a programme to transform India into a digital empowered knowledge economy, and was launched by Prime Minister Narendra Modi whose ambition is to make India 'Digital'. The initiative was started on July first 2015, at the Indira Gandhi indoor stadium in the national capital New Delhi. Digital India is centred on three key areas; Digital Infrastructure as a utility to every Citizen, Governance and services on demand, Digital empowerment of citizens ("Reforming government through technology," n.d., E-governance section). The aim of our research is to talk about one of the nine pillars of Digital India which is e-Governance and its challenges and issues related to implementation.

Introduction to E-governance

E-governance stands for electronic governance and the main objective of e-governance is to provide government services at the door steps of citizens. The process of e-governance implementation includes the following:

Government Business Process Re-engineering. is making changes to the existing procedure and processes to make it more efficient and effective with the help of ICT and their services like, online application submission requesting for services and tracking process. Eg: online application submission requesting for Birth certificate.

Electronic database. is digitizing the data of various entities involved with the government such as citizen's data, government records, tenders. Services like workflow automation are automating the process of work within the government departments. Public grievance redressal follows IT process to solve the grievances of the citizens.

Global Scenario

Every year The United Nations assesses its 192 Nations Member States for the global e-government development by an index called the E-Government Development Index (**EGDI**).

EGDI is measure of three dimensions of e-government namely: Provision of online services, Telecommunication connectivity and Human capacity.

According to EDGI 2014 e-government rankings is as follows:

The Republic of Korea is at the top rank with the EGDI of 0.9462, followed by Australia with the EGDI 0.9103 and at 3rd position is Singapore with an index of 0.9076. Out of United Nations Member States, only Twenty-five countries have a "very high EGDI" with index values in the range of 0.75 to 1.00 with a majority of 64 per cent (16 countries) from Europe, 20 per cent (5 countries) from Asia, 8 percent (2 countries) from Americas and 8 per cent (2 countries) from Oceania. Among the United Nations States, 62 countries (32 per cent) are ranked as "high-EGDI" (between 0.5 and 0.75). The majority of the countries falls in the middle range, with 74 countries (38 per cent) ranked as "middle-EGDI" (between 0.25 and 0.5). The lowest performing group, ranked as "low-EGDI" (less than 0.25), consists of 32 countries (17 per cent).

Figure 1: Chart below shows percentage of countries grouped by EGDI
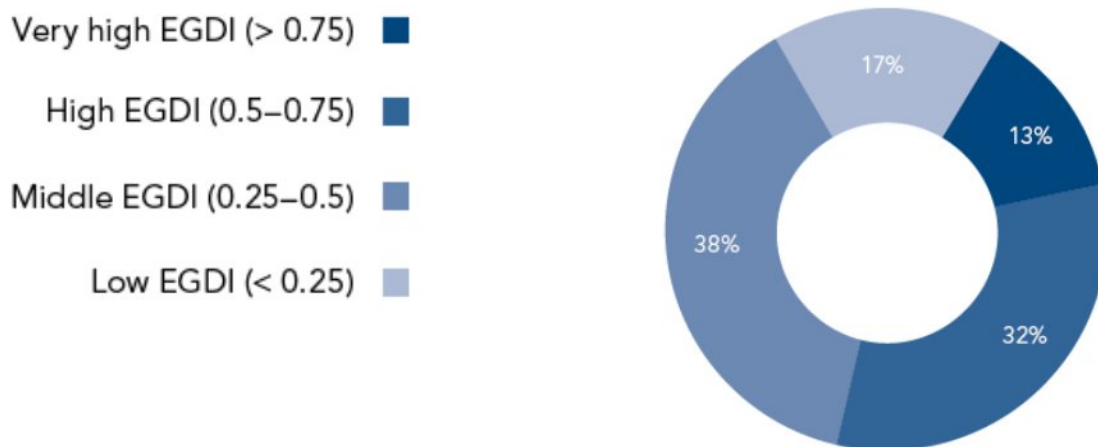
The Republic of Korea provides a fully digitized public administration with advanced Government-to-Citizen (G2C) and Government-to-Business (G2B) service delivery and multi-channel communication and transactions. India is one among 72 middle range countries with

EDGI (0.25 to 0.5) ("Government Development Index," (2014). E–Government development index table. para. 2).

Table 1. Considering our Indian scenario, the table below, shows the primary sectors, and the government services which are provided state wise with the names of few government projects implemented.

Sl. No	Sector	Services	States
1	Transportation	CFST	Andhar Pradesh
		OSRTC	Orissa
2	Payment of Bills and Taxes	FRIENDS	Kerala
		BWSSB	Bangalore
3	Public services	LokMitra	Himachal Pradesh.
		Mahiti Shakti	Gujarat
4	Municipal Services	E-Panjeeyan	Assam
		TRIS	Tripura
6	Rural E-Governance Initiatives	Gyandoot	Madhya Pradesh
		SEEDNET	Government of India.
7	Local Information	E-JanSampark	Chandigarh.
		E-DISHA EkalSewa Kendra.	Haryana government
8	Land Records	Bhoomi	Government of Karnataka
		CMLR	Andhra Pradesh.
9	Education	CASCET	Karnataka
		CAPnic	Kerala
10	Panchayat Services	E-GramViswa Gram Project	Gujarat
		SamanyaMahiti	Karnataka

The above projects ("Major e-Governance Projects," (2015). E-governance projects and research centres section) are successful because of the following reasons:-

- Easy & Fast

- High efficiency

- Quality and less turnaround time.

- Minimizes corruption

Research Methodology

The research methodology applied for this paper is using both primary source methods, such as interviews, questionnaire and observations, and secondary source methods, such as books, journals and the Internet, and careful evaluation has been performed on the collected information. The result analysis is presented in form of charts for clear understanding.

Issues and Challenges

Issues and Challenges according to the visionaries of Digital India

- Program on this scale never conceived

- Each Pillar/program has own challenges

- Human Resource Issues

- Ministries –Need a Chief Information Officer / Chief Technology Officer (CIO/CTO)

- Financial Resource & Coordination Issues

According to our understanding the basic issues and challenges in implementing e-Governance or any other Digital India initiatives are:

Different language. India is a country of kaleidoscopic variety. There are 22 different languages spoken by People belonging to 29 states and 6 union territories. E-Governance applications are in English language. English is not understandable by most of the people as only 10.35 % of Indian population know English ("List of countries by English-speaking population", 2015., List section). Therefore, it becomes a challenge for the government to develop E -Governance applications in more than one language.

Low literacy. Literacy is understood as the ability to read and write. The term's meaning has been expanded to include the ability to use language, numbers, images and other means to understand and use the dominant symbol systems of a culture. Literacy level of India is As per Population Census of India 2011 is 74.04% which is low and forming an obstacle in

implementation of e-Governance projects ("Ranking of States in India by Literacy Rate," 2015, para. 3).

Low computer literacy. Digital literacy is non-existent among more than 90% of India's population ("National Digital Literacy Programme," 2015, NDLM introduction section). India has over 6, 50,000 villages and 2, 50,000 panchayats which is represented by 3 million panchayat members. Approx 40% population is living below poverty line, illiteracy rate is more than 25-30% and digital literacy is almost no-existent among more than 90% of India's population and this is a biggest challenge.

Awareness of e-governance services. citizens are not aware of the governance facilities, thus awareness of the e-Governance facilities by the citizens is another big challenge.

Services are not accessible easily. In a country with more than 6, 50,000 villages, where more than half of its population live in rural areas and off-the-map villages. Most are remote and too isolated to benefit from the country's impressive economic progress ("National Digital Literacy Programme," 2015, NDLM introduction section). Therefore, government has to provide internet access through public terminals as a part of their universal access efforts.

Population. India, with 1,285,364,917 (1.28 billion as of August 24, 2015) people is the second most populous country in the world. The figures show that India represents almost 17.31% of the world's population, which means one out of six people on this planet live in India. Although, the crown of the world's most populous country is on China's head for decades, India is all set to take the number one position by 2030. para 2). Population of India is probably the biggest challenge in implementing e-governance projects. As population is considered to be an asset to the country but it also offers some other challenges e.g. establishing person identities like Unique identity to its citizens (UIDIA), and as on 20 April, 2015 the total number of Aadhaar cards issued by UIDAI reached 81.78 crore, with 67% of the country's 121 crore population possessing the card. Apart from this, measuring the population, keeping the database of all Indian nationals and keeping this database updated and then providing the e-governance services to the whole population are major challenges ("Enrolment figures in Aadhaar card," (2015), para 1).

Geographical problems. Communication networks must be established in all areas, as the villages and remote areas are not connected by communication networks.

Cost. Overall Costs of Digital India is Rs 100,000 Cr in ongoing schemes (DeitY, DOT) and Rs 13,000 Cr for new schemes & activities. 29.8% of the Indian population lives below the poverty line. Poverty in India section, para. 1). Involvement of huge amount is a challenge in implementation of e-Governance as majority of the population is living below poverty line. The costs must be low so, that it guarantees a good cost/benefit ratio.

Low per Capita income. Per capita income means how much each individual receives, in the terms of money, of the yearly income generated in a country. Therefore, people cannot afford on-line services provided by the government which is a challenge for implementation of e-governance.

GDP. The gross domestic product (GDP) measures of national income and output for a given country's economy. The gross domestic product (GDP) is equal to the total expenditures for all final goods and services produced within the country in a stipulated period of time. The Gross Domestic Product (GDP) in India was worth 2066.90 billion US dollars in 2014 ("Gross domestic product (GDP) in India," (2014). India GDP table). Since India has low GDP it is difficult to implement and maintain the e-Government projects properly.

Survey Report

Survey was conducted in nine different villages to understand the ground reality about the issues and challenges stated above and it was conducted within the average distance of 64 km from Bangalore City (the IT hub of India). The research methodology applied was observation and personal Questionnaire and primary data has been collected to do the analysis.

Survey Findings

Based on the respondents of questionnaire and observation, the following points are listed as findings

Literacy Rate in Villages. Out of number of respondents, only 65.28% are literates and 34.72% respondents are illiterates (refer figure 2), which indicates high illiteracy rate. Literacy is any essential factor for successful implementation of e-governance services to the citizens.
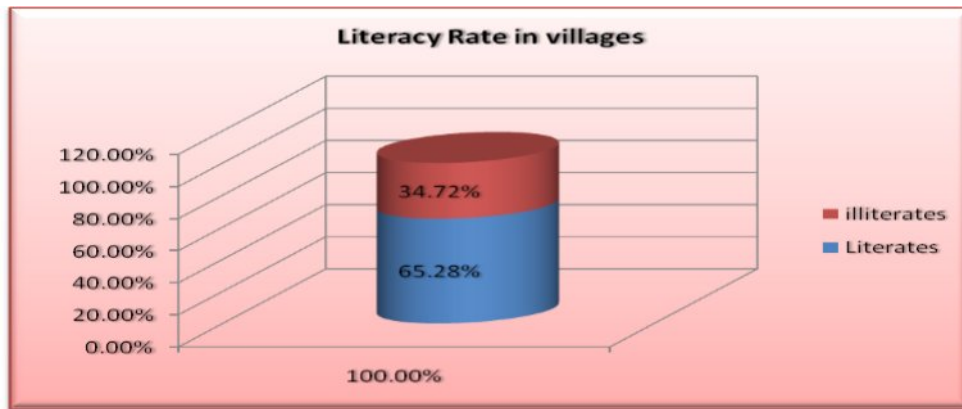

Figure 2. **Literacy rate in villages**

Annual Income. The graph (figure 2) given below clearly shows that 60% of the respondents annual income is less than Rs.25000/-. Further 15% of the respondents income is more than 25,000/- and less than Rs.50, 000/-. While 10% of the respondents annual income is more than 50,000/- and less than 75,000/- and the remaining 10% have no income.
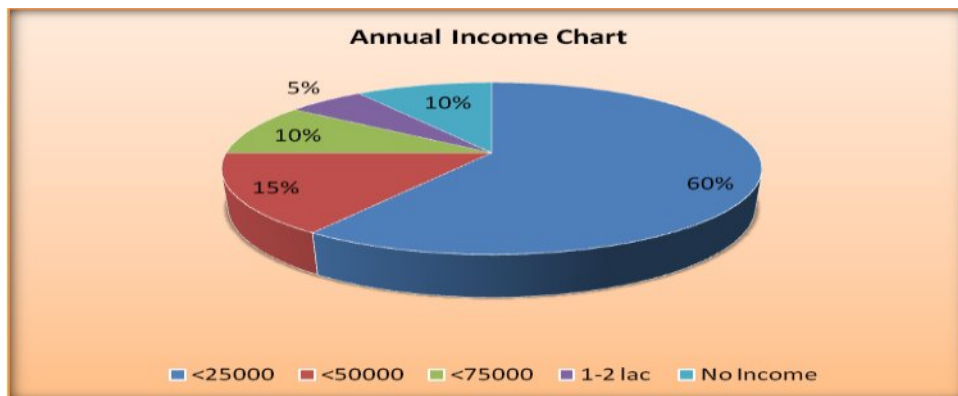
Figure 3. Annual income chart

Occupation of the respondents. The main occupation of the respondents is agriculture with 50% followed by 18.06% students who are pursuing education, business with 16.67%. 6.94%

of the respondents are pensioners, 4.17% of the respondents are having private business. While 2.78% are house wife's and only 1.39% are government employees (Refer figure 4).
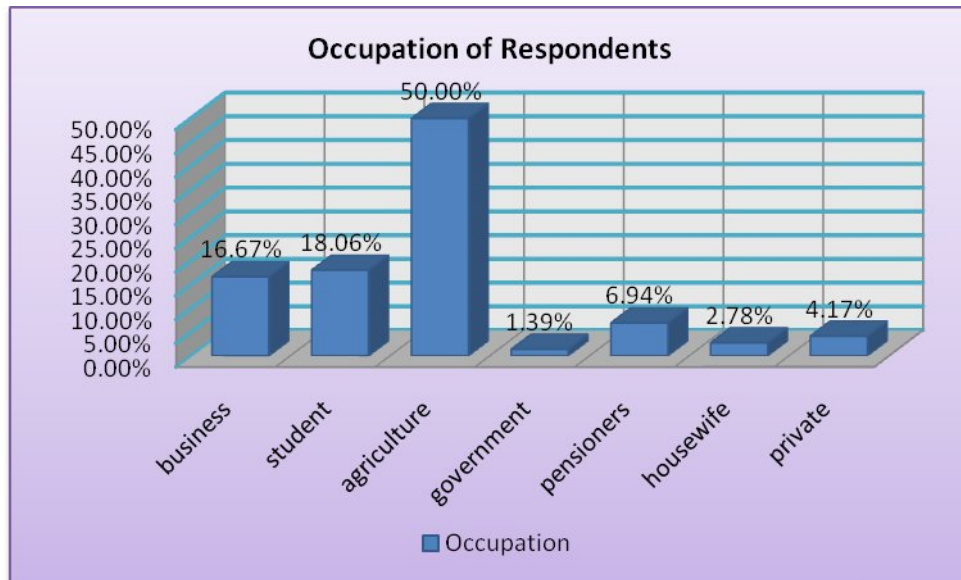

Figure 4. **Occupation of respondents**

Gender of Participants. The respondents of our survey consisted of 62.50% of males and 37.50% of females as shown in figure
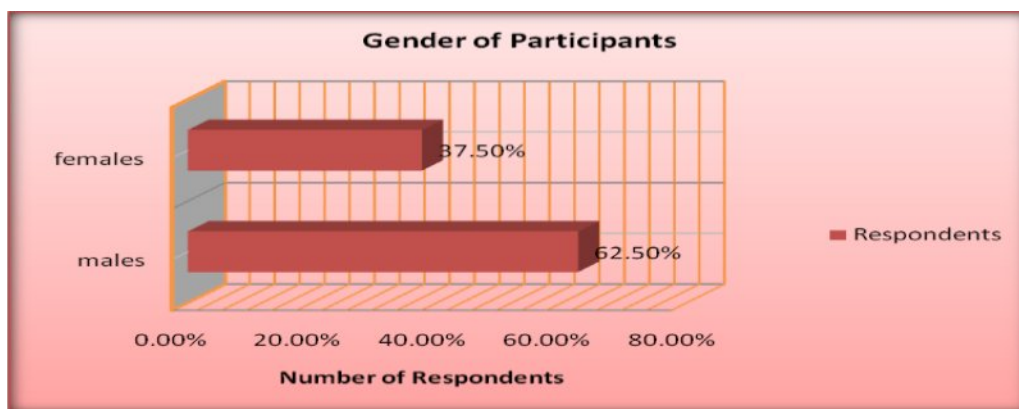

Figure 5. **Number of respondents**

Owning Computers. The analysis of the collected data reveals that only 9.72% of the respondents own a computer, while majority of 90.28% don't own a computer (figure 6).

Computer is a device which is essential for interacting with e-governance service providing portals.
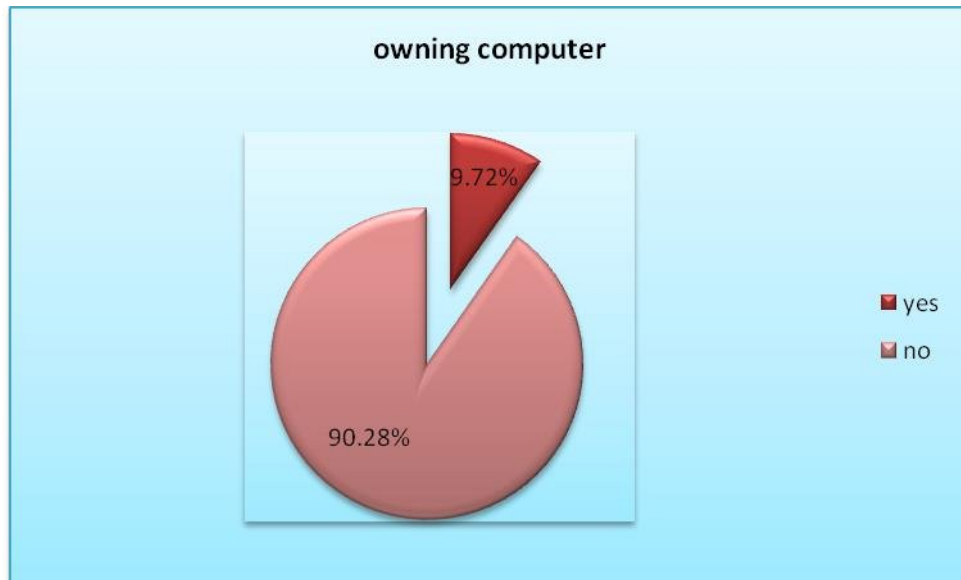

Figure 6. **Owning computer**

Browsing Centres. This part of the questionnaire revealed that only 5.56% had accessibility to browsing centre which provides internet connectivity to avail the facilities of e-Governance facilities. While 94.44% (figure 7) don't have access to browsing centre, which in turn means that no accessibility of e-Governance facilities or cannot avail the facilities.
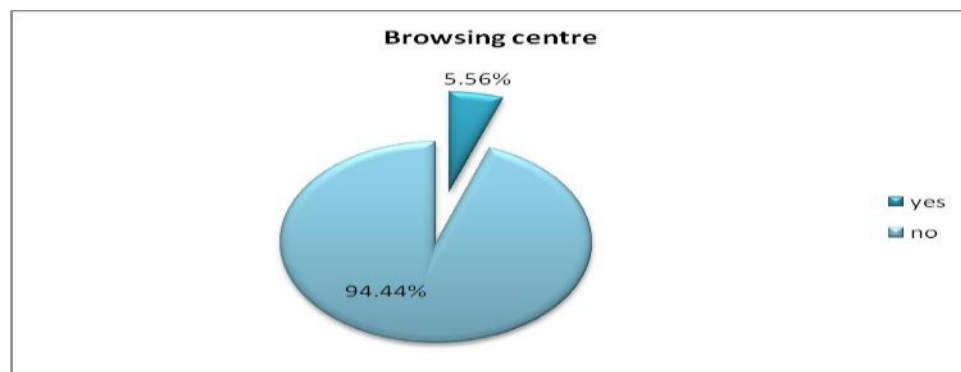

Figure 7. **Browsing Centres**

Qualification of Respondents. Majority of the respondents that is 30.56% is not qualified. 25% of the respondents are SSC followed by 23.61% UG and only 12.50% are Post Graduates. 8.33% are plus two. 30.56% are not educated means they are illiterates and they have to depend on others to avail or use the e-Governance services. 36.11% have tertiary education and 8.33% have secondaryeducation. Education is one of the essential factors required for successful Implication of e-company.
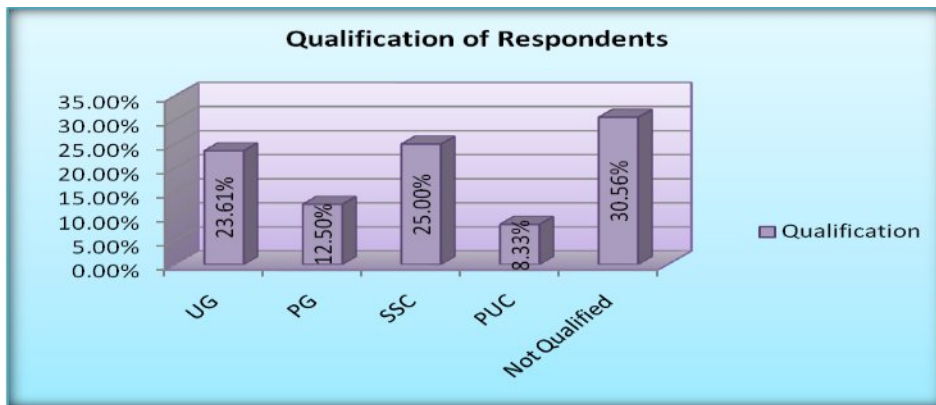

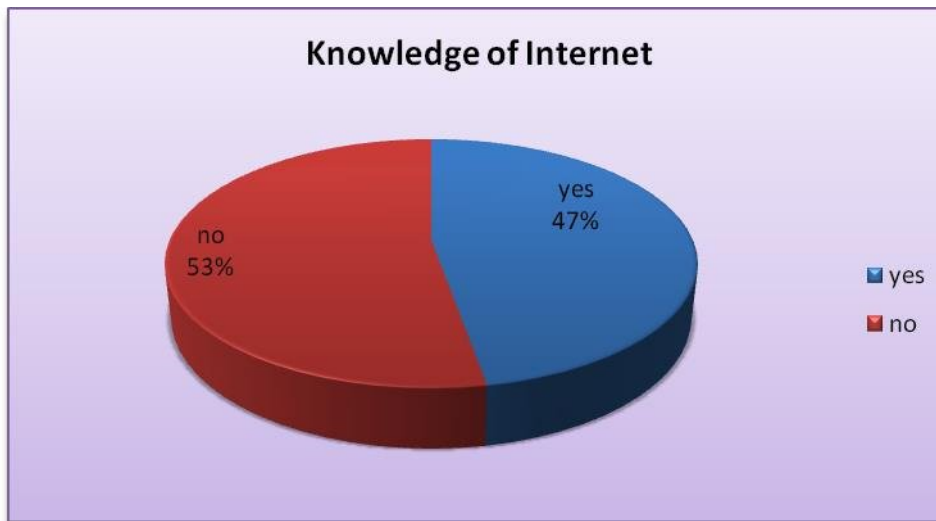*Figure 8*. **Qualification of respondents**

Figure 9. **Knowledge of Internet**

Type of Mobile Phone used. Majority of the respondents 52.78% use basic mobile phones which don't provide internet connectivity. 43.06% use smart phones which provides internet connectivity and using smart mobile phones portals of government service providers can be accessed, which increase the accessibility and mobility for the citizens with anywhere and anytime accessibility. 4.17% don't use mobiles (refer figure 10). Respondents who don't own computers or smart phones have to rely on browsing centres for the e-governance services which reduces accessibility.
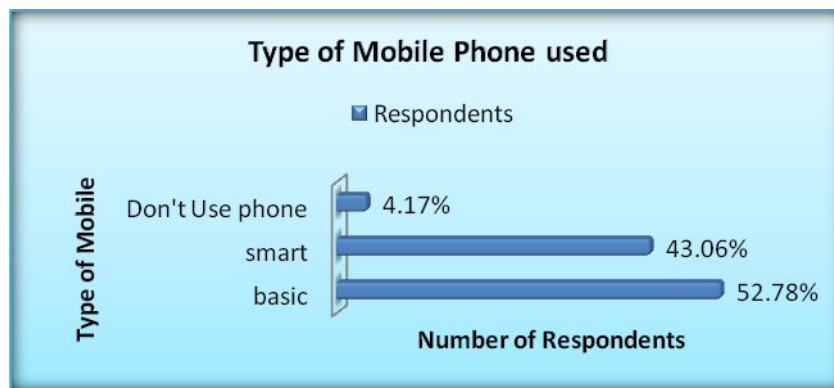
Figure 10. **Types of Phone**

Awareness of e-Governance Age wise. The graph (figure 11) below tries find out the relationship between age of the respondents and awareness of e-Governance. According to the graph the respondents between the age group of 18-24 are aware .respondents between age group of 25-34 are aware and are using the e-Governance services. Majority of the respondents 60% under the age group of 35-49 are not aware and 20% of them are illiterates. Respondents under the age group of 50-69 are not aware and only 10% are aware. Respondents under age group of 70-100 are not aware at all. This indicates high adult illiteracy rate which is a major impediment in
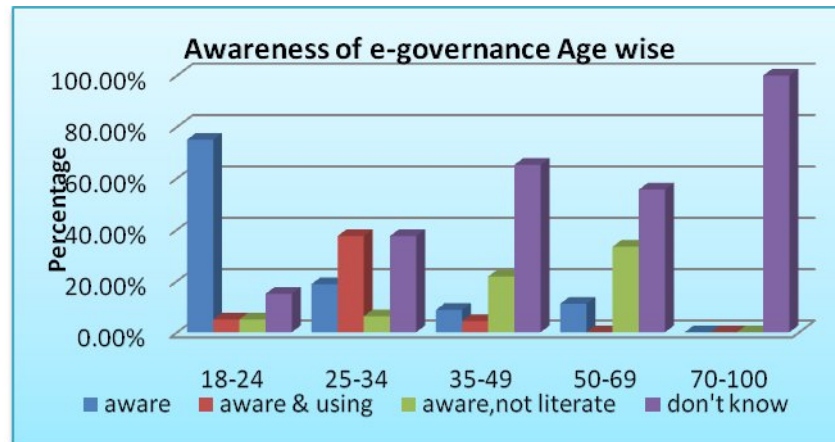
implementing e-Governance projects.

Awareness of e-governance Age wise

Figure 11. Awareness of e-governance

Literacy and Internet Knowledge age wise. The graph (figure 12) below tries to find out relation between age of respondent, literacy and internet knowledge. The graph reveals that respondents under age group of 18-24 are literates and 80% of them have internet knowledge. Respondents under age group 25-34 are literates and nearly 75% of them have internet knowledge. Respondents under age group of 35-49 that is majority of 80% are illiterates and have no knowledge of internet, only around 20% are literates and 15% have internet knowledge. Respondents under age group of 50-60, nearly 90% of them don't have internet knowledge and nearly 70% of them are literates and around 30% are literates and only 15% have internet knowledge. Respondents under age group 70-100 are illiterates and have no internet knowledge. It clearly indicates internet knowledge is related to literacy directly. Increase in Literacy rate increases the success of e-governance projects.

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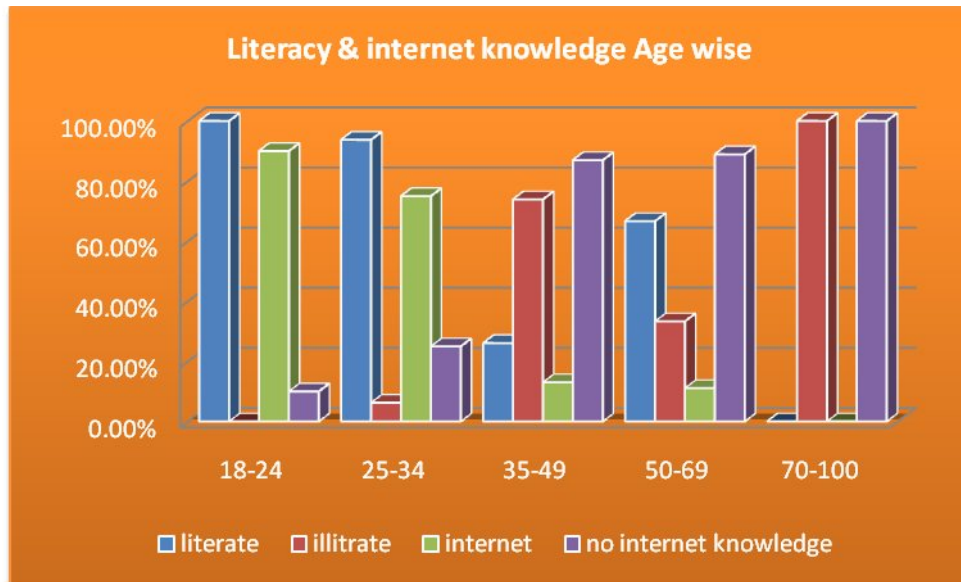
Figure 12. **Literacy & Internet knowledge**

From the above analysis it is very evident and clear that

1. Smart investment in ICT infrastructure is required
2. Investment in primary, secondary and tertiary education is essential for providing e-Governance.
3. Development of Human Resource
4. Access to ICT infrastructure to be provided
5. ICT literacy is essential

Suggestions and Conclusions

Digital India is indeed a very good initiative for making India digitally empowered society and knowledge economy. The issues and challenges needs to be resolved in order to reap the full potentiality of Digital India Program. India is an agricultural country. The main occupation in India is agriculture which employs 60% of the population and the agriculture sector contribution to its GDP is 17% in (2013-14) (Ramaraj Palanisamy. Bhasker Mukerji, 2012). Agriculture is an

important part of the country's economy as more than ten percent of the exports consist of agricultural products. Agriculture should be treated as an industry and agriculture produce should be getting remunerative price. Unless and until the last person in the society that is land less agricultural labourers, marginal land owners, downtrodden and exploited classes are not given proper opportunity to come to the main stream and inclusive development does not happen economy will not increase, in turn affordability and accessibility to services by the common citizens cannot happen. E-Governance top ranked countries are rich countries. Therefore, due importance should be given to the increase of economy of our country mainly agriculture sector.

According to The United Nations Bangalore is fourth in the world as a "Global hub of technological innovation". **The city of Bangalore is the "technology hub of the East".** But the villages which are at average distance of 64 km away from Bangalore do not have proper ICT infrastructure, electricity, network connectivity etc. Imagine then, how about the villages which are far away from the cities. Therefore proper infrastructure is to be provided in terms of connectivity, electricity etc. Although India has one of the largest economies in the world, the country is very poor. This is mainly due to its exceptionally large population. Corruption and poverty are other two issues which need to be addressed. Only through excellent education we can increase economic growth ("Current Gross Domestic Product (GDP) of India," 2014-15. GDP section).

.**References**

1. Current Gross Domestic Product (GDP) of India. (2014-15). *2015 Simple Interest Website.* Retrieved from http://www.simpleinterest.in/current-gdp-of-india/

2. E-Governance: Reforming government through technology. (n.d.). *Department of Electronics & Information Technology, Government of India Web site.* Retrieved from http://www.digitalindia.gov.in/content/e-governance-%E2%80%93-reforming-government-through-technology

3. India's Population 2015: Current Population of India. (2015). *Indiaonlinepages.com Website*. Retrieved from http://www.indiaonlinepages.com/population/india-current-population.html

4. India Society Blogs: Poverty and its causes in India. (2013). *Compare Infobase Limited Website*. Retrieved from http://www.mapsofindia.com/my-india/society/poverty-in-india-and-its-causes

5. India GDP: Gross domestic product (GDP) in India. (2014). *2015 Trading Economics Website*. Retrieved from http://www.tradingeconomics.com/india/gdp

6. Kiran Yadav. Sanatan Tiwari. & *Aditi mahavidyalaya.* (2014). *E-Governance in India: opportunities and challenges:* University of Delhi, India. *Advance in Electronic and Electric Engineering*. ISSN 2231-1297, Volume 4, Number 6(2014), 675-680.

7. List of countries by English-speaking population: (2015). *Wikimedia Foundation, Inc*. *Website*. Retrieved from https://en.wikipedia.org/wiki/List_of_countries_by_English-speaking_population

8. Literacy Rate in India: Ranking of States in India by Literacy Rate. (2015). *Indiaonlinepages.com Website*. Retrieved from http://www.indiaonlinepages.com/population/literacy-rate-in-india.html

9. Major e-Governance Projects: E-governance projects and research centers supported by Central and State Governments. (2015). *The Society for Promotion of e-Governance Website*. Retrieved from http://www.egovindia.org/egovportals.html

10. National Digital Literacy Programme: NDLM. (n.d.). *Digital empowerment foundation Website*. Retrieved from http://defindia.org/national-digital-literacy-mission/

11. Ramaraj Palanisamy. Bhasker Mukerji. (2012). *Security and Privacy Issues in E-Government:* St. Francis Xavier University, Canada. Retrieved from http://www.igi-global.com/chapter/security-privacy-issues%20government/55790

12 Stages of e-governance: Workshop of e-governance. (n.d.). *National Productivity Council.* Retrieved from Stages of e-governance

13. Sectors of Indian Economy: Major sector of Indian economy. (2015). *Mapsofindia Website*. Retrieved from http://business.mapsofindia.com/sectors/

14. UN E-Government Survey 2014: E–Government Development Index. (2014). *United Nations Department of Economic and Social Affairs (UNDESA) Website*. Retrieved from https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2014