

INFORMATION AND COMMUNICATION TECHNOLOGY IN RELATION TO HUMAN DEVELOPMENT.

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ABSTRACT:*This study takes a look at information technology in human development within the various sectors of life: health, education etc and to show whether or not ICTs have generated positive outcomes in these various sectors. This paper reviews the literature and research conducted in these areas so as to give an assessment on the impact ICT is having on the society. The paper also takes a look on the role of government policies and investment in ICTs as to their success in human development and whether or not ICTs should be given priority at all in poor and developing countries. The paper deduced from its findings that ICTs alone cannot improve peoples' lives; some strategic tools and techniques with the use of ICTs are required in order to enjoy a positive impact on human development.*

1. INTRODUCTION

Information and Communication technology is defined as the process of integrating computers, software to enable users to create, access, store, transmit and manipulate information. This study focuses on whether or not the access, storage, transmission and manipulation of various vital information has in any way helped in the development of the important sectors in the Nigerian economy. This study is to show if Information and Communication Technology has created an enabling environment for people to enjoy long, healthy and creative lives. Looking at the basic dimensions of human development, which make up the core measurement of its achievements: health, education, electricity

(power) , and other economic sectors and additionally at the dimensions of participation and empowerment, a survey of research and evidence demonstrates that despite major inequalities presently within and outside the country and continued gaps on access and use of information and communication technologies (ICTs), these tools and techniques can have positive impacts for human development.

The paper understands ICTs as tools or techniques that allow recording, storing, using, diffusing and accessing electronic information [16]. This paper also accepts more broadly that ICTs are “tools that facilitate communication and the processing and transmission of information and the sharing of knowledge by electronic means” [15]. The paper understands areas of human development as criteria of achievements that are essential for human life to flourish. In order to achieve these objectives, the paper starts by looking at the progress on the use ICTs from the early 80s till date, after which the paper takes a look ICT in health, education, electricity and other economic sectors. The paper concludes with the fact that ICTs can enhance capabilities for human development when applied with foresight, lack of embezzlement, good focus and clear objectives.

2. LOOKING AT ICT FROM 1980 TILL DATE.

In the early 80s, mobile phones were rarely used and internet services was very expensive and so slow. In recent years, there has been an incredible spread of mobile phone connectivity and its use around the world. There are now more than 4 billion mobile phone subscriptions around the world with 75 per cent of them in developing countries. Internet access has become so fast and cheap, its growth has increased with more than 1.5 billion Internet users around the world as of 2008 and nearly 60 per cent of them live in developing countries[6], making it a total of 137 percent increase since 2002.

3. ICT IN HEALTH DEVELOPMENT

Health is the vital sector of any economy, a nation without a good health care system is a nation with nothing. ICT has played a major role in the understanding of illness, its successful diagnosis and in the practice of medicine itself. The involvement of ICTs in health is commonly called e-health, it is essentially the use of ICTs in medicine for knowledge management and service delivery, a combination which can essentially improve the delivery of medical services and can by consequence improve health outcomes [15].

The World Health Organization (WHO, 2007) determines that there are five essential components to e-health: structural enhancement in the delivery of health services, engagement with stakeholders and the private sector in improving the availability and appropriateness of technologies, learning how to use the tools, creation of standardized norms and

practices, and evaluation and monitoring of the application and impact of ICTs to health. E-health is therefore a model that functions as a network of experts and resources that are able to be mobilized within a wide range of distance. E-Health enhances the timeliness of emergency response, thus reducing mortality rate and hospital cost. Surveillance and information gathering systems that allow the recording and analysis of data on spread able diseases is an example of ICTs in this field and is essential in managing the safety of populations [2].

Although many developing countries are unable to benefit from the advantages of E-Health because they lack the capacity to systematically evaluate developments in ICT, they lack standardized street addresses, unable to create digital records and databases for tracking the spread of disease, they lack access to online resources on treatment and diagnosis of illness, management tools and support for clinical care, developed countries are helping tackle these problems. Surveillance and information gathering systems that allow the recording and analysis of data on spreadable diseases is an example of ICTs in this field and is essential in managing the safety of populations[2]. Easy access to research findings, medical journals and publications and the existence of large body of medical knowledge via the World Wide Web plays an important role in the development of health using ICT.

Research has shown that there is a Heartbeat programme in Jordan that allows medical experts to give advice to doctors in remote areas where no specialist is present, thus the patient doesn't have to think of looking for funds to travel and this has led to the reduction of unnecessary visits to the few heart specialist of the country and has helped saved millions of dollars for the health system in the country. "Telehealth,

electronic health records, computer-assisted prescription systems, accessing clinical databases and other aspects of e-health are transforming health today and hold even greater promise for the future"[13]. As the technologies continue to evolve and their use becomes more ubiquitous, the field of medicine will see further increases in its capabilities through enhanced "remote consultation, coordination, and diagnosis" [2].

In conclusion, research has showed that ICT has positively contributed to the development of health. Since information can save lives and ICTs are designed specifically to facilitate the sharing and retrieval of knowledge, this has long a long way in ensuring the safety of lives throughout the world.

4. ICT IN THE DEVELOPMENT OF EDUCATION

The benefits of ICT in the development of education cannot be underemphasized, there has been immense growth in education because of ICT. We now have on line courses which allow students to have access to syllabuses in school programs that are unavailable within the country. It is generally believed that ICTs empowers teachers and learners, promote change and foster the development of '21st century skills. This implies that teachers are properly trained so that they are able to make the most use of the tools and that this new direction be promoted at the highest level within the learning institution.

ICTs are believed to be able to contribute to the enhancement of learning in the world since these tools can play a role in reforming education systems, increasing access to pedagogical resources, improving the management of education and enhancing pedagogical techniques [16].

ICTs are seen as means to distribute and provide easy access to learning resources which in turn have great potential for impact in areas where ICT infrastructure is present but resources such as books and libraries are scarce. "ICT can be a catalyst by providing tools which teachers use to improve teaching and by giving learners access to electronic media that make concepts clearer and more accessible" (ibid: 214).

Although in poor countries building libraries may be more appropriate than purchasing computers and connecting to the Internet because of the high costs of having access to the Internet and the unreliability of electrification in these developing countries. In Africa, for example, the average capacity of an Internet connection for a whole campus can easily cost as much as eight times the average annual income and yet be much more restrained than the average high speed connection in North American or Europe which costs a fraction of the price[4]. The challenge facing those who aspire to make available the benefits of new ICTs to poor and marginalised communities is to ensure that all of these conditions of access are met" [10].

Education they say is the passport for the future, it is therefore important to note that ICT has contributed immensely to the growth of our future.

5. ICT IN THE DEVELOPMENT OF POWER.

Good Electricity is the most essential commodity for any economy to grow well. There are an estimated 1.5 billion people worldwide who do not have access to electricity and 85 per cent of them live in rural areas of developing countries [5]. Unwin[10] remarks that it is rather difficult to make use of ICTs for development where there is no power supply, as is the case for many communities of sub-Saharan Africa

where only 15 per cent of rural households have access to electricity. This is why engineers have developed new, low cost devices for local electricity generation; better ways to store, carry and transmit electricity; and lower power consumption by ICT devices" [10]. Thus, ICT has indirectly led to the generation of a more cheaper means of generating electricity.

6. ICT IN THE DEVELOPMENT OF OTHER ECONOMIC SECTORS

The invention of ICT has made the economy to grow beyond measure. ICTs has contributed as much as 59% of productivity growth within the United States as a whole during the second half of the 1990s[4], researches have showed that broadband Internet continue to have important impacts on productivity and economic growth even in the most advanced economies. It is estimated that this is the case for the United States and North European OECD countries where additional investments in broadband have stimulated as much as 10 per cent of recent productivity growth as a result of the broader benefits of the technology [7].

ICT has created some benefits in the agricultural sector. In India, for example, The e-Choupal model, was designed to maximise revenues of rural farmers by giving them access to a network of markets and buyers for their products. The objective in this model is to make a direct connection between farmers and markets. The network reaches more than a million farmers in 11,000 villages. When making use of the network, financial gains to farmers are reported to average 2.5 per cent above those of traditional systems. Another benefit of the e-Choupal model is that it functions like a telecentre and so can be a place of assembly for farmers who are then able to purchase supplies collectively therefore giving them bargaining power when negotiating with

seed, fertiliser and equipment vendors. Conducting business as small groups, in a cooperative fashion, the participating farmers are able to purchase necessary supplies in larger quantities therefore reducing their costs [3].

Telecommunication is another example of highly successful use of ICTs, the use of mobile phones has empowered people within communities by increasing their incomes through the sale of recharge cards and via public phone calls. Besides, ICT in Nigeria has helped set up telecommunication companies which never existed before thus providing employment for millions of Nigerians.

The emergence of mobile banking resulting from ICT has helped developed banking services by bringing banking services to the masses of rural poor who live and work beyond the reach of official banking institutions[12]. Through mobile transaction services, money can now be sent to and from all corners of the world and also be used to do payments thereby reducing the need for expensive travelling to urban centres and reducing the costs of wiring money. Mobile banking has tremendous potential in the developing world and could "prove to be particularly valuable and pro-poor because basic financial services including secure savings accounts, non-usurious credit opportunities, currency management and fund transfers are critical to many low-income communities" [12].

With the above stated few areas of ICT development, it is however right for me to conclude that ICT has helped in the tremendous growth in the economy.

7. Conclusion

This study looked at information technology in human development within the various sectors of life: health, education etc and the reviews of the literature and research

conducted in these areas has given a good assessment on the impact ICT is having on the society. This study has showed ICTs have generated positive outcomes in these various sectors. The paper deduced from its findings that ICTs alone cannot improve peoples' lives; some strategic tools and techniques with the use of ICTs are required in order to enjoy a positive impact on human development.

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