

## ICT AND NON - FORMAL EDUCATION IN AFRICA

---

*James O. Ezema, (Ph.D)*

*Department of Adult and Continuing Education,  
Enugu State University of Science and Technology,  
Agbani, Enugu,  
Nigeria.*

**And**

*Rev. Fr. Declan O. Aguzie*

*A Post Graduate Student,  
Department of Adult and Continuing Education,  
Enugu State University of Science and Technology,  
Agbani, Enugu,  
Nigeria.*

### **Abstract**

*It appears to those involved in adult and continuing education sector that “non – formal education refers to the totality of educational activities outside the school system”. Education systems in general and non – formal education institution in particular, feature many mechanisms by which exclusion occurs, even though this is not officially intended. Among other reasons, it may be the result of what are referred to as ‘unruly practices’, such as teacher behaviour, or of traditions of institutional differentiations, such as the formal/non-formal divide, that have not sufficiently been interrogated in terms of their unequal access and impact on adult and young people’s lives. The result is while some inclusion occurs because of additional non – formal education opportunities, exclusion often follows as a result of the unequal terms under which participation takes place and which, in turn, may perpetuate the disadvantage. Consequently, the use of Informal and Communications Technologies (ICTS) in non – formal education (NFE) is relatively disparate across Africa. Many programmes focus on developing ICT literacy among targeted communities: the unemployed youth; women; rural communities; and, in some cases; civil society organizations. Some are distance learning programmes, and many offer face – to – face training*

*courses, some of which are accredited, while others provides certificates of attendance. From a more holistic perspective, within the wider ambit of the educational field NFE can be regarded as an arena in which a variety of pressures for educational reform play themselves out. This has become all the more possible since, due to historical circumstances, forms of NFE in Africa have remained the only vehicle by which large numbers of people are able to obtain a basic education. The NFE domain has been the arena that could serve as a laboratory for many initiatives that, in Africa, focused primarily on the inclusion of the disadvantaged, the poor and rural communities. ICTS in the form of radio, internet, open schools consortium, mobile internet vehicles, computer kiosks, ICT literacy, community learning centres and video conferencing could have interplay in non – formal education in Africa.*

**Keywords:** ICTS, Education and Non – Formal Education.

The use of ICTS in non – formal education is relatively disparate across Africa. Many of programmes focus on developing ICT literacy among targeted communities: the unemployed; underprivileged youth; women; rural communities and, in some cases, civil society organizations. Some are distance learning programmes, and many offer face – to – face training courses, some of which are accredited, while others provide certificates of attendance.

In some countries, radio is used to disseminate education programmes to poor communities. Sierra Leone is one example of this. Guinea is an example of conducting adult literacy programme via the Internet.

While a number of countries in Southern Africa have established an open Schools Consortium that involves a range of institutions providing secondary education through distance learning. Their focus is on preparing learners to secure sustainable livelihoods by improving their academic qualifications and providing training to create and maintain income – generating opportunities. These institutions will be sharing their resources and experience in developing academic and vocational education programmes and materials.

Mobile Internet vehicles have been introduced in Mauritius. Mauritius has introduced a Cyber Caravan Project that is aimed at making ICT facilities available in the most isolated areas in Mauritius. The Mauritian National Computer Board operates two cyber caravans, which are equipped with nine and 10PCs respectively and Internet connection. Training is provided on board based on the needs of the

communities and includes ICT literacy and awareness courses, including one specifically targeted at children. The cyber caravan is also used to offer free skills training for unemployed people in an attempt to increase their prospects for employment. Zimbabwe has also used mobile Internet buses (“Big Blue”).

Computer kiosks have also been introduced. For example, an initiative that can be considered the South African equivalent of the “hole in the wall” project piloted in India, known as the Digital Doorway, introduces computer literacy to rural and disadvantaged communities by making computer equipment and open source software available in the form of computer kiosks to enable people to experiment and learn without formal training and with minimal external input. These kiosks will be rolled out to 122 sites across the country.

ICT literacy has also been demonstrated. A number of civil society network organizations run digital literacy or ICT awareness programmes for targeted groups, organizations, and individuals. SangoNet and WomensNet in South Africa, WougNet in Uganda, Rubatana.Net in Zimbabwe, the Community Education Computer Society (CECS) in South Africa, and AngoNet in Angola are few examples operating predominantly in the Southern African region. Kenya has the Mkuru Promotion Centre, which develops ICT skills, particularly for under-privileged youth.

Community learning centres have also emerged. UNESCO has assisted with the establishment of community learning centres in five African countries. The project provided the centres with digital radios, data interfacing equipment, and technical backup, and the centres were setup to enable large numbers of local learners to participate in a course on telecentres. The course was delivered using the Combined Live Audio and Slide Show (CLASS) technology of World Space Corporation. Videoconferencing has also been experimented on. Egypt has a video – conference distance learning centre that links 27 sites across the country to provide learning facilities in remote areas.

### **What is ICT?**

Information and communications technologies (ICT) is a diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information. Communication and information are at the heart of the educational process, consequently ICT use in non – formal education has a long history. ICT has played an educational role in non – informal education settings, in programmes provided by governmental agencies, public and private educational institutions, for profit corporations and non – profit groups, and secular and religious communities.

Information and communications technology (ICT) are also often associational with the most sophisticated and expressive computer – based technologies. But ICT also encompass the more conventional technologies such as radio, television and telephone technology. While definitions of ICT are varied, it might be useful to accept the definition provided by United Nations Development Programme (UNDP) (2012) that “ICT are basically information – handling tools – a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information” (p.4). They include the ‘old’ ICT of radio, television and telephone, and the ‘new’ ICT of computers, satellite and wireless technology and the Internet. These different tools are now able to work together, and combine to form our ‘networked world’ – massive infrastructure of interconnected telephone services, standardized computing hardware, the internet, radio and television, which reaches into every corner of the globe.

When we talk of ICT, we refer not only to the latest computer and Internet based technologies, but also to simple audio Visual aids such as the transparency and slides, tape and cassettes reorder and television; and film. These older and more familiar technologies are referred to under the collective heading of “analogue media” while the newer computer and Internet based technologies are called the “digital media”.

However, in today’s world, with the increased convergence or blending of the engineering designs and with the coming together of the satellite and the computer, the dividing lines between these different media are becoming blurred and consequently, the way people define and refer to ICT is also getting blurred.

Often, the definition of ICT is also done in terms of “old” and “new” as if to distinguish between the analogue and digital. But what is “old” and what is “new”? Livingstone (2010), in an extensive exploration of the idea of newness, has argued that the notion of “new” can either be seen with reference to the “newness of technology” or in the context of “what’s new for society” about these media. Livingstone further argues that what is new for the Western world is not necessarily so for the rest of the world. Within a social context, the introduction of radio or television may be as “new” as the introduction of Internet. While there is much euphoria about the ICT, after more than half a century of research, social scientists are still skeptical about tall and ill defined claims about potential societal changes that may follow a technological innovation. This means that ‘new’ cannot merely be defined either in terms of time and time scales or in terms of the technology innovation.

### **What is Non – Formal Education?**

Notably, in the recent past, the definition of non – formal education has once been an issue. Some adult educators are arguing that the very term ‘non – formal education has lost its meaning and relevance as well because of both the current issue of diversity of forms and the difficulties in drawing a line between what a formal education and what is non-formal education, when it has been noted that so many initiatives of educational programmes show characteristics belonging to both types of education (formal and non – formal) the term ‘formal’ and ‘non – formal’ and to either refer directly to different programmes of basic education or to subsume all forms under ‘lifelong learning’ (ADEA/WCINE, 2010, Rogers, 2011). Adult education specialists have made a case for dissociating their specialty from non – formal education and simply referring to it as ‘adult education’ (Bhola, 2012).

In this scenario of definitional arguments, however, seem most importantly to be restricted to educational specialists and expert meetings. However, it is striking how easily in practice governments and civil society organizations in the South (less developed countries) continue to use the distinction as defined by Combs and Ahmed (1970) as cited in Zafa, (2012) with his colleagues. In the North (developed countries, where the term ‘non – formal education is rarely used, the term ‘lifelong learning’ has increasingly gained currency when referring to the totality of educational activities outside the school system (Field 2011). It has also been found striking that at country level, those involved with education issues (including parents and young people and adults) appear to know precisely what belongs to the non – formal category of education and what this means to them. While there are strong commonalities across countries, the precise demarcations tend to vary according to national realities (Carnon & Carr – Hill, 2013).

The term ‘non – formal education, has come to cover education (and training) initiatives as far apart as extension services for farmers, HIV/AIDS peer group support, Community Schools, functional literacy programmes, programmes for street children, shepherd schools’ entrepreneurship development programmes, language classes, multimedia community development, centres, youth skills development projects, self – therapy groups, and in – service courses for teachers.

### **ICT Role in Non – Formal Education in Africa**

Observations show that public access to ICT is available to various extents in most of the larger urban centres in Africa through cyber café’s, but access it is largely non – existent in rural areas. It has been found that most of the national ICT policies in Africa identify the need to provide access for the general population as an essential ingredient for development. A common strategy for doing so is the establishment of local centres that provide access to computers and Internet connectivity, and often to TV and peripheral services such as printing, cassettes, DVD players. Training and

information dissemination activities related to ICT, literacy, health, markets, and government services are often part of the operations of such centres. However, examples of ICT establishments for non – formal education exist across Africa. Madagascar is establishing “ICT villages” with digital classroom, health centre and community ICT access. In another development, Mozambique has common unity multimedia centres resulting from a merger of existing telecentres and some radio stations. While Mauritius uses a fleet of “cyber caravans” to take ICT facilities to remote areas. However, as far as non – formal education is concerned, the predominant infrastructure used is still the “old” technologies of radio and television.

### **Types of Non – Formal Education Programmes**

There are different types of non – formal education provided in different socio-cultural contexts in different countries across Africa. Some of the significant types of non – formal education provided across Africa include:

**Popular Education:** Is one of the categorization of non – formal education which was proposed by Carron and Carr – Hill (2012). This included three other categories of NFE such as popular education, personal development activities and professional training. This categorization has been based on a set of students on four countries (Argentina, Canada, Hungary and the former Soviet Union) undertaken in the context of the IIED (International Institute for Educational Planning) Co-ordinated research programme on “the diversification of the educational field” carried out in the 1980s. Popular education was seen to be located at the other extreme of the educational field, where there are activities that explicitly try to stand aloof from the formal school system, if not at times oppose the basic principles of its functioning (Carron & Carr – Hill, 2013). The main characteristics were seen as concentrating on the poor, a learning – by – doing approach, high levels of structural flexibility and a constant pre – occupation to adopt the learning activities to the changing needs of the users. It was noted that these activities however, are those that most resemble the original ideas of the promoters of NFE in the late 1960s and 1970s (Carron & Carr – Hill, 2013).

Popular education is directly associated with a distinctly Latin – American movement that emerged in the 1960s and 1970s to search for alternatives to human – capital – oriented forms of non formal (adult) education. It has also been noted that a central component here has awareness – raising or the psychosocial pedagogy typically associated with Paulo Freire that is used to transform participants’ perspectives on their social reality (Labelle, 2010). Labelle went further to argue that popular education needs to be treated both as a special type of NFE, as it is intended to combine critical awareness, literacy and other basic skills, and as an open – ended means for social action. The awareness – raising method was developed by Freire as a rejection of mass education, which he felt imposed silence and passivity, stifled criticism and made participants objects rather than subjects of reality (Labelle, 2010).

Although popular education has remained associated with social action for structural change, in more recent years it has tended to become less oppositional seeking collaboration with the state in working for social change. This has also led to more emphasis being placed both on the pedagogical process within a context of democratization in the education system and on collaboration with formal public schools (Van Dan & Peter, 2011). Outside Latin America, popular education has sometimes become the collective label for a variety of educational activities or social movements, promoting the management of lifestyles and living conditions at both individual and community levels, and raising awareness on socio – political issues – as in Canada and Sweden. They often have an element of political mobilization in that they lead to a questioning of existing social relations (Carron & Carr – Hill, 2013).

**Personal Development:** Is an upsurge in many countries, but especially in the North, and has been in the NFE category of ‘personal development’. This is defined as education programmes covering a range of learning practicals organized by cultural institutions that promote leisure-time activities. It includes a market approach whereby different courses are sold either for direct consumption or as human capital investment (Carr – Hill, 2013). For Field (2011), these are the terrain of new adult education, with its wide range of forms: highly individualized, more privatized and more ephemeral. Residential short courses, study visits, fitness centres, sports clubs, heritage centres and self – therapy programmes are the most typical types of personal development. Here, the purpose is to improve oneself and to struggle with oneself and one’s intimate relationships (rather than against oppressors). These programmes constitute typical forms of lifelong learning in the North, as they satisfy a need to utilize (expanded) leisure time and income, and respond to widespread needs to give meaning to one’s life (Field, 2011).

**Professional and Vocational Training:** Is a category in the NFE domain, non – formal professional and vocational training – as different from those forms subsumed under para – formal education – covers all training outside the formal or non – formal forms of initial skills training leading to categorized national diplomas. Thus, it includes on – the – job learning, artisanal or informal sector apprenticeships, agricultural or industrial extension services, entrepreneurship development programmes and all forms of in-service skills development, upgrading or re-skilling, as well as similar programmes launched for the unemployed in the context of re-employment or flexibilization of the workforce. In as far as courses do not lead to recognized diplomas, this category also includes the many industrial, commercial or artistic programmes offered by private schools and colleges, whether officially registered or of the ‘fly – by – night’ variety.

While in the North the registered types have increased exponentially in number in the wake of economic restructuring, deregulation and labour market flexibilization. In the South all types of skill development have significantly increased in Sieze (Field, 2011, Gallart, 2012). In many countries, the major source of non – formal skills development has become the informal sector of the economy, whether through forms of traditional apprenticeship or otherwise (King, 2010).

**Literacy with Skills Development:** At the same time, there has also been a growth in another type of non-formal training, which is a combination of literacy with skills development. This combination is not provided by the private sector, but rather by adult education NGOS and sometimes by the state or local authorities. This type of NFE has existed for quite some time and there are programmes that have been shining examples for several decades of what can be achieved by providing integrated support services for disadvantaged youth, preparing them for life and for work.

It appears that in recent years this type of NFE has attracted fresh attention from NGOS and governments, particularly in situations where there are large numbers of young people with insufficient or no – schooling, who are too old to be accepted into the formal system and whose conditions of poverty and marginality are such that they require specific combinations of training and personal support to ensure their survival. Usually such programmes combine (functional) literacy training with life skills, orientation to self – employment and income – generation skills. Governments are becoming involved in a bid to provide some form of relevant people in vulnerable situations, such as programmes for street children and patronized schools in Thailand and the ‘Alternative Learning Opportunities’ programme in Lesoto.

### **ICT and Non – Formal Education in Africa**

What does using ICT in education, especially non – formal education, mean? This is a good question to begin our discussion of ICT with. ICT has a strategic, mutual relationship in non – formal education programmes. ICT is associated with the proper mode of providing non – formal education skills training programmes for youth and adult.

ICT has a role in education, especially, non – formal education. Liberalization, privatization, and globalization constitute the current social, economic and political space with which ICT is utilized in designing and providing NFE programmes on them.

Revolutions in information and communications technologies have reduced national boundaries through the provision of non – formal education. And in the new scenario, NFE has been identified as one of the ways in which the world will become

one global village. Then more than now, knowledge through NFE is expected to become a tradable commodity; it will be essential that African educators keep pace with world changes through NFE provision through ICT.

Most Africa's demographic mosaic consist of an increasing demand for non – formal education for a population, half of which is below 15 years of age, 75 per cent rural, a literacy rate of about 60 per, cent; and a linguistic breakup of 15 different major languages. Thus, the demand for education far outstrips the conventional system's ability to provide it, leaving no alternative to the use of technology in education, especially, non – formal education.

We are at a critical junction, when the new technologies of communication – from the individualized computer assisted learning systems to the mass directed radio and television today offer an unparallel opportunity to reconsider conventional educational and learning practices and institutions. The notion that teaching and learning can be taken out of the confines of existing schools and colleges, that teaching can be individualized and insensitive to geo-climatic distances is one which has emerged out of the telecommunications revolution sweeping across the world in the 1980s and 1990s.

And yet, the urban-rural divide in terms of access, equity, and resources will continue to be the main issues that African educators, particularly adult educators will have to address as the needs of the learning community in the new social economic and political contexts will change.

We no longer have a choice. It is no longer and “if” but “how” to deploy the technologies optimally. Information and communication technology application constitutes an absolute necessity, given huge dispersed populations.

The new technologies offer us the chance to telescope the decades of infrastructure building and development activities by providing us with the advantage of high speed delivery with no dilution in quality; wide reach, individualization of learning in any time, anywhere situation; and interactivity, a low per unit cost. These technologies and facilities can be equally used for language teaching, for literacy and adult learning (non-formal) education.

### **Challenges**

There are many challenges facing the use of ICTS in non-formal education. Access to technology has been very important. In most African countries access to technology has been the greatest challenge of employing ICTs in development and skills training programmes. This is evident when we realize that there are more telephones in Tokyo or in New York than in all of sub-Saharan Africa.

A computer in some parts of the world can cost a month's salary or more. This differential in access to technology is known as the "digital divide". The digital divide is not just an issue of the polarization of the information rich versus the information poor. It is also a divide between men and women everywhere.

Even with regard to Internet users, in most countries, the number of Internet users is miniscule. According to the Telecommunications Union (ITU) statistics released in 2002 on female internet usage, in poorer countries, women represent a much smaller proportion of even this insignificant number.

While the users tend to be young, urban based, majority of people in Africa are less literate, rural based where connectivity is rare or even non-existent.

### **Conclusions**

ICT is often associated with high-tech devices such as computers and software, but ICT also encompass more conventional technologies such as radio, television, and telephone technology.

The term ICT refers to forms of technologies that are used to transmit, store, create, share or exchange information. This broad definition of ICT includes such technologies as radio, television DVD, telephone (both fixed and mobile), satellite system, computer and network hardware and software; as well as the equipment and services associated with these technologies, such as videoconferencing and electronic mail.

### **Recommendations**

Based on the context of this paper, the authors have offered the following recommendations:

1. ICT should be applied in the provision of skills development programmes for the young and adults in disadvantaged situation.
2. Individualization of learning in non-formal education programmes should be made possible through ICT.
3. ICT should reduce the cost of education especially in rural areas for the rural population
4. ICT literacy should be provided for the less educated to enable them to access ICT for learning especially, non-formal learning programmes.

### **References**

ADEA/WGNFE. (2010). *Diversifying Education Delivery System: Reviewing Discourse on the Formal/Non-Formal Interface. Report of the Workshop on Non-Formal Education*. Gabon Botswana Press.

- Blola, H. (2012). World Trends and Issues in Adult Education on the Eve of the Twenty-First Century. *International Review of Education*, 44(4), 485 – 506.
- Carron, G. & Carr-Hill, R. A. (2013). *Non-Formal Education: Information and Planning Issues*. Paris: UNESCO.
- Field, J. (2011). *Lifelong Learning and the New Educational Order*. Stoke on Trent: Trentham.
- Gallart, M. A. (2012). *The Diversification of the Educational Field in Argentina*. IIEP Research Reports 73. Paris: IIEP – UNESCO.
- King, K. (2010). *The Planning of Technical and Vocational Education and Training System, Training Discussion Paper 64*. Geneva: ILO.
- LaBelle, Th. (2010). Goals and Strategies of Non-Formal Education in Latin America. *Comparative Education Review*, 20 (3), 328 – 345.
- Livingstone, R. C. (2010). *Apply New Technologies in Education*. New Delhi: Sage
- Rogers, A. (2011). *Non-Formal Education: Flexible Schooling or Participatory Education*: Comparative Education Research Centre: The University of Hong Kong.
- UNDP (2012). *Communication Technology and Human Resources Development*. New Delhi: Sage.
- Van Dam, A. & Peter, G. (2011). *Popular Education in Latin America: Society and Impact of Social Policies*. The Hague: CESO.
- Zofa, C. C. (2012). *Modern Perception on Adult Education in Nigeria*: Port Harcourt: Pre-Joe Publishers.