

# EDUCATIONAL TECHNOLOGY: AN INSTRUMENT FOR COMMUNITY TRANSFORMATION

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## **Abstract**

*Educational technology as a field of study has undergone numerous considerable changes since 1968. It is very concerned when communities need transformation for the betterment of their citizens. Although educational technology helps immensely in the teaching-learning process, it also helps in the transformation of communities. This paper examined the varied concepts of education, technology and educational technology. It also examined the concept of community education as an agent of community transformation, the importance of educational technology in relation to community transformation, as well as roles of educational technology as an instrument of community transformation. It was recommended that government should recognize the importance of technical business education, as well as commerce and industry. It was also recommended that communities should send delegates through their local governments, state ministries of education to federal headquarters for extensive training. This will lead to empowerment of youths towards overcoming unemployment, and also help in transforming the communities positively.*

**Keywords:** Education, technology, educational technology, community, community transformation.

Nigeria is a developing nation. The present administration put into consideration, the basic infrastructure that will encourage and facilitate growth in every sector of the economy (Ike and Iwu, 2012). Here, most communities (if not all) in Nigeria need education to sensitize their members (citizens), power to promote discipline in technology-know-how and employment for the youths of the community. It has been discovered that most communities (rural) do not have good roads for easy transportation, social amenities like good water, electricity and so on for the betterment of the communities. These communities specialize solely on agriculture. In other words, they are predominantly farmers, and they depend on agriculture for their livelihood. With the help of provision of social amenities by the government to the communities like good water, good road network, electricity, shelter and so on, communities will be transformed for the betterment of its citizens through educational technology.

Therefore, for this to be realized, the country should look inwards to map out ways of transforming the communities in the state and local governments. This could be done when educational technology is adopted as an instrument for transforming communities. This topic therefore is discussed under the following subheadings:

- Concepts of education, technology and educational technology.
- Community education as an agent of transformation.
- The importance of educational technology in relation to community transformation.
- Roles of educational technology as an instrument of community transformation.
- Conclusion and recommendations.

### **Concept of Education, Technology as well as Educational Technology.**

#### **Concept of Education**

The word ‘education’ has no universally accepted definition. Many erudite scholars and experts have made various attempts in defining ‘education’ in aspects like schooling, training, indoctrination and so on. The word ‘education’ is derived from two Latin words ‘educere’ and ‘educare’ both meaning ‘to lead out’ and ‘to bring up’ respectively. From the first meaning of education as ‘educere’, education implies all the experiences regarding training offered to the youths by the family, school and society to make them useful to themselves and society. From the second meaning of ‘educare’, education is seen as a process of helping each individual to be capable of living good life and be useful to the society in which he lives (Duru, 2012).

Peters in Duru (2012) defined education as a process by which children are initiated into what is worthwhile. Supporting this view, O’Conor in Duru (2012) regarded it as a process by which society deliberately transmits its cultural heritage to generations through schools, colleges and other tertiary institutions which can take place both in and outside organized classroom. This connotes the root meaning of education according to (Sampath, Panneerselvam and Santhanam, 2009) as

*“Bringing up or leading out or making manifest the inherent potentialities in a pupil’. It is also regarded as a product of experience. In other words, it is the process by which and through which the experience of a race ie. Knowledge, skills and attributes are transmitted to the members of the community”*

John Dewey in Sampath et al (2009) speaks of ‘education as the reconstruction or reorganization of experience which adds to the meaning of experience and which increases ability to direct the course of subsequent experiences’. This agrees with the national policy on education (2014) that education here in Nigeria is seen as an instrument ‘par excellence’ for effective national development.

Conclusively, one can deduce that education brings up an individual and as well, leads out an individual so as to conform with the community (society) where he/she finds him/herself. What then is technology?

### **Concept of Technology**

*Technology is about the 'doing' and not 'what' is done. Technology is derived from a Greek word 'technologia' meaning 'systematic treatment'. It is said to be a systematic process of solving problems in any related field such as education, medical, communication, etc (Achuonye, 2004).*

Smith, Voorhees and Morris (2013) defined 'technology' as the theoretical knowledge of industry and the industrial arts. It is also the application of science to the arts. It is also defined as that branch of ethnology which treats the development of the arts. Hornby (2004) in view of Smith et al, opined that 'technology' is a scientific knowledge used in practical ways in industry, for example, in designing new machines. According to Romiszowski in Ezekoka (2009), technology is the creative application of scientific and other knowledge in industry (practical) purposes. Therefore, technology is the application of scientific and other organized knowledge to a particular task systematically. Technology in educational context is divided into two, namely; technology of education and technology in education. Technology in education refers to the use of technological advancement such as various equipment, materials and machines for educational purposes. It also involves the increasing complex range of audio-visual equipment, hardware and sophisticated electronic devices like projectors, films, radio, television etc for individualized and group learning (Mangal and Mangal, 2012). It can also be said to be the application of technology to any of those processes involved in operating institutions which house educational enterprise (Ike, Iwu and Onwuagboke, 2015). Technology of education refers to the design and evaluation systems of learning, and understanding of the psychology of learning, of communication and information (Ike, Iwu and Onwuagboke, 2015). Mangal and Mangal (2012) opined that technology of education cannot limit itself to the role of service as confined in the case of technology in education. It does not represent something added or helped from outside as sounded in the case of technology in education. What then is educational technology?

### **Concept of Educational Technology**

For the analysis of a huge task at hand as well as the application of scientific knowledge to the performance of the huge task, educational technology comes into play because they must fall within the domains of education. Here, one can deduce that educational technology is the systematic application of scientific or organized knowledge to identifying and analyzing educational problems and evolving and managing programmes for solving educational problems (Dike in Ezekoka, 2009). UNESCO in Sampath et al (2009) defined educational technology in three ways, thus;

“Educational technology is a systematic way of designing, implementing and evaluating the total process of learning and teaching in terms of specific objectives. It is also the development, application and evaluation of systems, techniques and aids to improve the process of human learning. Furthermore, it is the application of scientific knowledge about learning and conditions of learning, to improve the effectiveness and efficiency of teaching and learning”. Tickton, Ostini and Imogie in Ike, Iwu and Onwuagboke,(2015) defined educational technology as a systematic way of designing, carrying out and evaluating the total processes of learning and teaching in terms of specific objectives, based on research in human learning and communication and employing a combination of human and non-human resources to bring about more effective instruction. In this same vein, the Association for Educational Communications and Technology (AECT) defined educational technology as:

*A complex integrated process involving people, procedures, ideas, devices, and organization; for analyzing problems and devising, implementing, evaluating and managing solutions to the problems, involved in all aspects of human learning (AECT,1979)*

Furthermore, educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological process and resources (AECT 2004).

Conclusively, educational technology is a systematic and scientific approach to identifying educational problems using human and non-human elements in designing, planning, implementing and evaluating the solutions strategies aimed at a better performance of the educational system (Salawu, 2000).

### **Community Education as an Agent of Transformation**

What is a community? Community is described as all the people who live in a particular area, country etc, when talked about as a group (Hornby, 2007). It is also defined as a group of people who share the same religion, race, job, etc. in the same vein, Smith et al (2012) defined community as ‘the people who reside in one locality and are subject to the same laws, have the same interests’. Having discussed ‘education’ earlier, what then is community education? The White paper (2000) defined community education as thus; “Community education is the education that takes place in the community but is not necessarily of the community”. It is also a system of provision within the community by a range of institutions including schools, training agencies, universities, churches and others who make premises and resources available locally. It is also a process of communal education towards empowerment, both at an individual and at collective levels. It is also on this note that National Association of Adult Education in Irish (2000) defined community education, thus;

*“Community education is education and learning which is rooted in a process of empowerment, social justice, change, challenge, respect and collective consciousness.*

*It is within the community and of the community, reflecting the developing needs of individuals and their locales. It builds the capacity of local communities to engage in developing responses to educational and structural disadvantages and to take part in decision – making and policy – formation within the community”*

It is pertinent to know that community education enables participants to emerge with more than new personal skills and knowledge. How then is this education an agent of transformation?

Formal education has the purpose of passing norms, culture and traditions of the community from generation to generation. Empowering participants with skills, knowledge and collective analysis to challenge oppression and engage in action to bring about change is the intention of community education. When members of the community acquire skills, knowledge through community education, they become empowered practically and this brings about transformation in the society they belong in the course of implementing the acquired skills, knowledge, etc.

### **Importance of Educational Technology in Community Transformation:**

The following are some aspects of the importance of educational technology in community transformation.

1. Educational technology tries to examine the concepts of teaching, phases of teaching, analysis of teaching, levels of teaching, the relevance of the theories of learning, the relationship between teaching and learning, the integration as well as learning for attaining optimum educational purposes all in transformation of communities. When educational technology discusses all these in the communities, there will be improved communication skills as well as developed capacity of interaction as a group which in turn brings about transformation in the community.
2. With the help of improved communication skills and development of interaction as a group, educational needs can be identified as well as the community’s aspirations. When problems arise, with improved communication skills, those problems will be solved as team-work is required.
3. Teaching and learning in communities when greatly influenced by the use of audio-visual aids, the interest of communities is aroused. This brings about improved confidence, self-esteem, increased knowledge, skill and competence.
4. The teacher is the key factor or agent in any process of teaching and learning. In other words, educational technology takes care of the proper preparation of teachers for exercising their huge responsibilities in the communities. It is in the vein that actions are taken to tackle community issues collectively so as to bring about increased awareness of educational and life choices.
5. Mangal and Mangal (2012) opined that ‘various sophisticated instruments, equipment, gadgets and communication devices brought through mechanization and electronics revolution are playing an effective role in the attainment of educational objectives by helping teachers and learners in their respective roles.

*In other words, educational technology helps in immersing into the teachers and the learner in their respective roles, the use of various gadgets (instruments) to improve their ability to commit to and reach specific goals as well as create great awareness of self – reliance and competence in the community to emit transformation (Mangal and Mangal, 2012).*

### **The Role of Educational Technology as an Instrument of Community Transformation**

When technology and digital services are used ethically and responsibly, they have potentials to be great equalizers and connectors of our time. The roles of educational technology in community transformation are as follows:-

1. Educational technology helps to provide tools for learning, one of those tools is called mind - tool which is any computer programme the learner uses to engage and facilitate critical thinking and higher order learning (Jonassen, 2000 in Chaulk, 2009). When this tool is introduced in the community, there will be increase in critical thinking and analytical skills in solving educational and community problems.
2. It makes education more productive when instructional materials are used to speed up the rate of students' learning in the teaching – learning process (Ezekoka, 2009). When this is introduced in various communities as a way of transformation, the students in the community understand faster the concepts of the subject matter taught by the teacher. They will also understand deeply and retain whatever that has been taught to them; and this also brings about increased knowledge and motivation.
3. When instructional media like flip charts, diagrams, projectors and power points as well as other gadgets are introduced and used in teaching – learning process, it makes learning to be more real, permanent, concrete and immediate. They bridge the gap between the outside and inside worlds of the school. It is also pertinent to note that when these media are used in communities, there will be increased knowledge as well as increased communication skills among community members (students).
4. When educational technology is applied properly, it helps in individualizing instruction. The needs of the students in the communities via learning are met and catered for. When these needs are met through the proper application of instructional media, like teaching machines, community members will be able to establish their small-scale businesses (ie. They can be entrepreneurs) to transform the community as well as the lives of their families, friends and the community at large.
5. Through community education, as in (4) above, the community members will be empowered. Here, there will be development of capacity to influence policy and decision making in the communities. They will also have the ability to organize further personal and group development. It also promotes increased skills and competences.
6. It gives room for experiences to be gathered; but not easily obtained at times through other materials. It will also contribute efficiency, depth and variety of learning in the community all gearing towards transformation.

7. In the teaching – learning process, it provides the teachers the means of arousing and sustaining the interest of learners as well as changing students’ attitude (Ezekoka, 2009). When instructional media are used, they help in stimulating and sustaining learners’ interest. Coming to the context of community, audio-visual media like television set when introduced, enlightens, arouses and sustains the interest of community members on how to modify the norms, cultural values, life of the people, and, as well as introduce innovative techniques of improving the livelihood of their communities.

8. It makes instruction more effective and strong (powerful). When new forms of communication systems are introduced and used, it makes man more efficient, effective and capable. In the community setting, some remote events can be brought to the community hall (classroom) through the use of motion pictures. These motion pictures are used in sensitizing other parts of the country/world such as boko haram in some northern states of Nigeria, snow in Europe. This makes learning more lively, and encourages the students to participate effectively. This is also community transformation.

9. Educational technology makes access to education to be more equal. In other words, the less privileged and the handicapped students can attain the same level. In communities, there are different cadres of persons in ranks. Educational technology opens up different ways through which these different cadres of persons’ needs are met. In some developed countries like Canada, USA and so on, almost all schools gain access to instructional packages, drama and events through the use of educational television. Nigeria is yet to get this stage of development. So, communities are to be given helping hand in this area.

### **Conclusion**

Educational technology is concerned with all the variables, phases, levels, and aspects of the teaching – learning process. Where communities are involved, there is a need for transformation. In Nigerian setting, as a developing country, she needs to be transformed inwardly and outwardly so that communities through education can be empowered, transformed and improved in all spheres of human development.

### **Recommendations**

Based on the discussions, the following recommendations are made:-

1. Teachers should be devoted to improve themselves on the use of educational media so as to become efficient in the use of the materials for effective instruction.
2. Communities should send delegates through their Local government ministries to the state or federal headquarters for extensive training. This will bring about empowerment of youths to disrupt unemployment, and also help in transforming the communities positively.

3. School administrators should ensure that 'use of educational technology' is introduced as a subject / course in the schools and communities as well as make sure that teachers effectively utilize it so as to make teaching and learning meaningful.

4. The government in collaboration with educational administrators should organize seminars, conferences and workshops for training teachers and student-teachers effectively in the use of instructional media to train the communities in which they are working or serving. This will help the communities to be transformed for good.

5. Due to the current situation of our country Nigeria, government should assist the teachers and the communities at large in the procurement of these expensive instructional media so that both the teachers and the learners (communities) would benefit and communities will be self-reliant and improve technologically.

### References

- Achuonye, K.A. (2004). *Contemporary educational technology*. Port Harcourt: Pearl Publishers.
- AECT (2004). *Definition and terminology committee M.M.4.0*. Washington DC.
- Association for Educational Communication and Technology (AECT) (1979). *Educational technology definition and glossary of terms I*. Washington DC.
- Chaulk, C. (2009). *Role of technology in education*. Unpublished article for ED6620. Memorial University.
- Dike, H.I. (1999). *A textbook of educational technology*. Port Harcourt: Capiic Pub.
- Duru, V.N. (2011). *Curriculum Studies: Concepts, development and implementation*. Owerri: Avan Global Publishers.
- Ezekoka, G.K. (2009). *Foundation of educational technology*. Owerri: Liu House of Excellence Ventures.
- Federal republic of Nigeria (2014). *National policy of education*. Lagos: NERDC Press.
- Hornby, A.S. (2001). *Oxford advanced learners dictionary of current English*. China: Oxford University Press.
- Ike, G.A. & Iwu, A.O. (2012). Improvisation of appropriate secondary school science instructional material: A right step toward promoting entrepreneurship education. *Journal of African Education* 1(1), 26-33. Owerri: Cape Publishers International Limited.



- Ike, G.A., Iwu, A.O. & Onwuagboke, B.B.C. (2015). *Educational technology in a global world*. Owerri: Cape Publishers International Limited.
- Imogie, I. (1990). *Problems of integrating educational technology into teacher education*. In Nigeria review of education 2. UNN: Institute of Education.
- Jonassee, D.H. (2000). *Computers as mind-tools for schools: Engaging critical thinking*, (2<sup>nd</sup> ed.). Merrill: Upper Saddle River.
- Mangal, S.K & Mangal, U. (2012). *Essentials of educational technology*. New Delhi: PHI Learning Private Limited.
- National Association of Adult Education (AONTAS) (2004). *Community education*. AONTAS Mission Statement.
- Peters, R.S. (1996). *Ethics and education*. Great Britain: George Alien and Unwin, Ltd.
- Sampath, K., Panneerselvam, A. & Santhanam, S. (2009). *Introduction to educational technology*. New Delhi: sterling Publishers Private Limited.
- Smith, S.S., Voorhees, R.W. & Morris, W. (2013). *The new international Webster's comprehensive dictionary of the English language: encyclopedia edition*. USA: Standard International Media Holdings.
- Tickton, S.G. (1970). *To improve learning: An evaluation of instructional technology*. New York: Bowkers.