

Visualization Teaching Methodology For Assimilation Of Knowledge: An Adult Educator's Approach

NWAKAIRE, Onuzuruike Nwagwu Ph.D

nwakaireo@gmail.com
University of Nigeria, Nsukka.
Faculty of Education,
Department of Adult Education & Extra-Mural Studies.

KOBANI, Doreen Ph.D

doreenkobani@gmail.com
betex2006jj@yahoo.com
kobani.doreen@ust.edu.ng
Rivers State University, Nkpolu-Oroworukwo
Faculty of Education
Department of Adult Education and Community Development

DOI: 10.29322/IJSRP.12.07.2022.p12722

<http://dx.doi.org/10.29322/IJSRP.12.07.2022.p12722>

Paper Received Date: 10th June 2022

Paper Acceptance Date: 27th June 2022

Paper Publication Date: 6th July 2022

Abstract: This paper takes a critical and in-depth analysis of visualization as a teaching methodology which enhances assimilation of knowledge by students. This methodology was developed by a Community development Lecturer and has been proved to be very effective in teaching students through a participatory approach coupled with visualization and the field work approach as investigative learning experience. It is recommended that teachers of the social sciences and adult educators adopt this approach to enhance assimilation of knowledge, encoding of information and thus, enable students impact positively on their world after graduation. It exposes the students to the skills of enquiry learning, stimulates their thinking and makes them problem-solving conscious. Though, found to be challenging to the Lecturer, its use will, over time, elicit such satisfaction in the teacher that his versatility will be enhanced.

Keywords: Visualization, Teaching Methodology, Assimilation, Knowledge, Adult Educator.

Introduction

Creative thinking ability is usually developed if a student is exposed to the skills from infancy. This is what education ought to impart to the human organism as a means to conquer his environment. Fafunwa (1994) stated that education is the aggregate of all the processes by which a child or young adult develops their abilities, attitudes and other forms of behaviour which are of positive values to the society in which he lives; that is to say, it is a process for transmitting culture in terms of continuity and growth and/or disseminating knowledge either to enhance social control or to guarantee rational direction of the society or both.

To be able therefore, to fulfill the purpose of education, teachers have to endeavour to task the intellectual capacity of the students. They should be able to associate abstractions with realities. This is where the challenge lies. The teaching of abstraction challenges the intelligence of a student to grasp constructs which enhance his problem-solving abilities. It also challenges the versatility of the teacher to make more concrete abstractions for use by the student to solve problems, which is the kernel of human development. Bah (1982) regretted that many teachers are like donkeys or mules which tread forever round and round the same course once they have learnt the routine. For an ideal university teacher therefore, an effort has to be made to innovate so that the student can relate abstraction to solve emergent problems in the society. This borders on traversing the information superhighway for knowledge and to visualize abstracts and bring them live to knowledge recipients. In this regard, Adult education as a programme of study on our campuses has multiplier effects as it fits nicely into the scenario created above.

Adult education utilizes subtle ways to lure and retain adults in learning experiences. Through the process of diffusion and assimilation, adult learning facilitators can begin their job of positive influence right there on the campuses (Kobani and Kpurunee, 2019) and as emphasized by Smith in Kobani (2018) adult educators must concern themselves with what the learners learn, what holds their attention most and their reactions to specific methods and techniques used.

Homily (2000) saw visualization from its verb form to visualize as meaning to form a picture of something or somebody in one's mind or to imagine. For the teacher therefore, visualization will mean forming constructs or abstractions in creative manner. Artists who have visual images of abstractions create these in drawing. For the teacher, this will mean forming mental images and using words to create these images or bring them to life.

Value of Good Tertiary Education

Tertiary education, also referred to as third stage education, is the educational level following the completion of a school providing a secondary education. It is an optional final stage of formal learning often delivered at universities, polytechnics, academies, colleges, seminaries, conservatories, and institutes of technology. Tertiary education typically seeks to ensure students have a broad understanding of many subjects, with an extensive and deep understanding of a particular field of study. It is an educational level where one is exposed to diverse knowledge while focusing extensively on one field. A popular campus pun says 'a university is a universe in a city and a city in a universe'. The diverse experiences on campus positions tertiary education graduates for the inter-relatedness of knowledge in the future. Completers of tertiary education institutions are awarded with certificates, diplomas, and other degrees (Kobani and Kpurunee, 2021). Justifying the need for tertiary (higher) education, Wilhelm von Humboldt in a letter to the Prussian king, wrote:

There are undeniably certain kinds of knowledge that must be of a general nature and, more importantly, a certain cultivation of the mind and character that nobody can afford to be without. People obviously cannot be good craftworkers, merchants, soldiers or Businessmen unless, regardless of their occupation, they are good, upstanding and – According to their condition – well-informed human beings and citizens. If this basis is laid through schooling, vocational skills are easily acquired later on, and a person is always free to move from one occupation to another, as so often happens in life. (Günther, K. H. 1988: 127–136).

The Federal Republic of Nigeria (2004), indicated that the goal of tertiary education, amongst other goals, was to develop the intellectual capability of individuals to understand and appreciate their external environments and acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society. In order to achieve such goals, teachers in tertiary institutions are required to undergo training in the methods and techniques of teaching.

The World Bank (2003) showed that good quality tertiary education promotes economic vitality, improves people's health and livelihoods, and encourages open and cohesive societies. By their opinions, better education can transform the development prospect of developing and transition countries around the world, reducing poverty and inequality, and boosting economic growth. For this they concluded that tertiary education stands out in particular as they key to harnessing a global economy which increasingly relies on the use of ideas and technology to devise smarter ways of working and doing business.

Emphasizing the value of tertiary education Salami (2003) stated that more than ever, tertiary education drives a country's future, and in today's world it can make the difference between a dynamic economic and a marginalized one. As a result, modernizing the content and management of tertiary education must play a key role within a country's overall education agenda.

Salami went further to say that the key to a country's full participation in the global knowledge economy is the development of a comprehensive learning system that can move people from primary and secondary up through university level education and other forms of higher learning including workplace training where employers can update their skills on the job.

To be able to fill these needs, tertiary institutions need to have skilled Lecturers who are able to deliver the knowledge that is available in the information highway and to innovate. The task is arduous because knowledge management is vital for tertiary institutions.

Knowledge Management

As has been stated above the starting point for knowledge management is the cultivation of knowledge. McKinsey & Company (2003) showed that at a society level, two factors have the greatest influence on cultivation of knowledge, viz; education and the research and development environment.

What an education system is to achieve in this area as pointed to by McKinsey & Company (2003) which opined that "an effective education system cultivates talented individuals, and helps to create an environment in which these individuals have the opportunity and the aspiration to develop their own intellectual capital to its potential over time, and develop new forms of knowledge". In their opinion too, the payback to society is often longer term, but systemic and fundamental. Conclusively, McKinsey & Company (2003) showed that a society is in a position to cultivate knowledge effectively through its education system if three conditions are met:

- High-quality educational institutions exist at all levels, that will assist an individual to reach the potential of his or her intellectual capability;
- Individuals from all socio-economic levels of society have access to those institutions;
- A high proportion of individuals wish to take advantage of that access – i.e. continue their education beyond the maximum school leaving age into tertiary and post-graduate education.

In terms of knowledge cycle, McKinsey & Company (2003) stated that knowledge development cycle is not linear; knowledge does not remain stagnant once cultivated. When knowledge is disseminated and used, it is often improved. A teacher, in their opinion, who imparts knowledge, adds his or her experience or interpretation; a student who uses knowledge may conduct additional research. The three dimensions are to some extent blended. The student improves the knowledge, and the teacher in turn passes on the improved knowledge to the next student or the next class. And so the cycle continues.

Teaching/Learning

As assessment of the teaching/learning experience in Nigeria appears to show a gross deficiency requiring a critical shift from the status quo. This fact was highlighted by Sainta, Hartnett and Stressner (2003) who regretted that much of university teaching in Nigeria is based on traditional pedagogy and conventional curricular, and does not even meet the government's own standards in these areas. In their opinion, in today's world, the content and method of Nigerian university teaching is often outdated, not responsive to employer's requirements, and disconnected from the labour market. They stated further that likewise, its research output is extremely low and unable to prompt innovation-based productivity gains. They suggested that in order to increase the relevance and effectiveness of teaching and research, classroom dynamics may need to focus more on student learning performance, and that academic performances should seek stronger linkages with employers, and universities might pursue knowledge coalition with other institutions that possess a comparative advantage in some aspects of teaching and research.

The goal of learning should be clear: development of young people who can rise to the challenge of impacting their world positively through knowledge acquired in their institutions.

Bah (1982) expressed the same opinion when he quoted Bertrand Russell who stated:

When we have created young people freed from fear and inhibition and rebellions or thwarted instincts, we shall be able to open to them the world of knowledge, freely and completely, without dark hidden corners; and if instruction is wisely given, it will be a joy rather than a task to those who receive it. It is not important to increase the amount of what is learnt above that now usually taught to the children of the professional classes. What is important is the spirit of adventure and liberty, the sense of moving out upon a voyage of discovery.

If formal education is given in this spirit, all the more intelligent pupils will supplement it by their own effort, for which every opportunity should be provided. Knowledge is the liberator from the empire of natural forces and destructive passion; without knowledge, the world and hopes cannot be built.... Not we, but the free men and women who we shall create, must see the NEW WORLD, first in their hopes and then at last in the full splendor of reality.

It was in the spirit of impacting the knowledge needed to solve emergent problems and impact one's world that Nwakaire (2008) visualized the following constructs as a means of concretizing abstractions in three courses he taught final year students in the Department of Adult Education and Extra-mural Studies of the University of Nigeria, Nsukka.

I. The Course is Community Development, Theory and Practice.

Apart from understanding the key concepts implicit in the topic, the processes of carrying out the activity are required to visualize a situation where the knowledge would apply practically and how to do something about what they face using the knowledge. For this, Nwakaire (2008) created an imaginary community thus;

Umunkor is an autonomous community in Akan L.G.A. It has a traditional ruler who lives in properly landscaped compound of about two hectares of land. Community institutions in Umunkor include the Umuada Women Group, Ofu Obi Age Grade, the Hunters' guild and Umuokolobia Youth Association. Unfortunately, this same community of a population of about 50,000 is infected with absolute poverty. Men here are polygamous and engage in subsistence agriculture. To grind cassava, their women have to trek a distance of over 6 kilometers to a lone garri processing mill where they are charged exorbitantly. This same community has a lone stream - spring water, located at about 100 meters below sea level. The same women who "breed" children are sometimes seen, "baby at back", carrying pots of water balanced on their heads. This trip might take 6 hours to complete each day. In some families, there are up to fifteen mouths to feed. The three wives in some families quarrel and compete among themselves in their efforts to curry the flavour of their lousy husbands, who must each day consume a gallon of palm-wine each and empty two boxes of snuff in each nostril with tears dripping down their cheeks. The Associations existing there contribute money but merely engage in lavish parties each month, drinking themselves insensible

at such parties as they grope their way home at the end. You can only imagine the state of the children and the condition of women in the community.

It is to this community that you have been posted after your appointment and deployment to Akan L.G.A as a Community Development Officer.

Fully, identify the development needs of Umunkor community and write a proposal to the Chairman of the L.G.A on how to develop the community bearing in mind the social institutions that may serve as resources in your development proposal.

2. Another course involves the Role of Adult Education or Adult Educators in moderating the environment which may be hazardous to ensure the survival of the human species. The title of the course is Adult Education and Society. Health hazards in the environment are expected to be analyzed but how will an Adult Educator play his part? Nwakaire (2009) visualized, using a CNN Report:

The CNN (2009) reported that the Pope's visit to Africa ended in Angola amid controversies. The controversy centered around the Pontiff's reiteration of the Catholic Church Official stand on the use of condoms as a contraceptive. As a religious stand, the church maintains strict abstinence from sexual relations outside of marriage for its members rather than the recourse to condoms as a protective device. Aid groups in Africa however, feel that their work will be hampered by this stand of the church since already; many had contracted the HIV through sexual relations. As a consequence therefore, the Aid groups distribute condoms as a means of stemming the spreads of the disease. Nigeria as you know is not exempted from the spread of the virus and through the mass media, the people's stand has come to the knowledge of the aid groups working in Nigeria. A Seminar/Workshop has therefore, been organized to discuss the way forward amid the controversy.

Between the two divergent views/extremes, you have been invited by the Organizers of the seminar/workshop to deliver a dispassionate/non-religious, non-partisan paper to the August gathering. Present your Paper to me for vetting before delivery. Take cognizance of your role in managing the health hazards in the environment as an adult educator.

3. And finally, for the course that borders on the socio-cultural aspects of community Development (ADE 421), the visualization which was used to drill the students is indicated below:

Novelty does not enjoy universal appeal. That does not discourage active social animators anyway. Armed with working knowledge of development strategies they are still able to catalyze innovations in many societies as may be demonstrated in the situation that exists in Umuabali community.

Nwankwo of Umuabali community has had ten (10) births by his wife, Mgbafor. Of these ten, only two, look healthy and certain to keep alive. Others, apart from another two have followed a pattern of death throes – looking pale and the Hyperbilirubinemia manifesting in their eyes, hands and feet, a little fever, coldness and then death. Three other families scattered in the community have similar experiences. Over the years therefore, Nwankwo and his companions have had the sad experience of performing simple burial ceremonies for their dead children amid sadness, anger and curses by fellow residents in the community. Sadness over the death; anger over the presumed reincarnation of particular children; and curses that the gods should not allow them reincarnate again.

As a Social Animator, you happened to be visiting your friend in the community located in Ijemba L.G.A. where you have been deployed as a Community Development Inspector. You ventured to suggest that a genotype test be conducted on the parents of the deceased, anemic and ailing children. The dialogue followed this pattern:

Animator: But have they tested their blood so as to determine of the genotype of parents?

Residents: What test? The children are 'Ogbanje'. Even when we took one to task, she was able to locate her chi; we dug there and found it

Animator: That is the usual belief in many areas but we tried to investigate and found that some are associated with the genotype of their parents.

Resident: Look at this person: from where are you?

This dialogue is attracting some other residents who were eavesdropping; you are therefore, determined to change the negative perception of the residents. You have a health officer attached to the local government and there are age grades, youth clubs, Out Umuada etc., as human resources in the community. As a social animator, how will you go about developing this community? Start by mentioning the role of the social animator as an agent of rationalization.

Visualization may thus, serve as means to bring abstract constructs to reality and challenge the intellect to the student so that he may develop problem-solving skills and impact his world after graduation. This is realistic human development. Field trips may be undertaken to concretize the visualization after which the students will write reports.

Implications for Adult Education

It is the function of Adult Educators to engage in Workers education as highlighted in the National Policy on Education (2004) section 6 to the effect that the goals of Mass literacy, Adult and Non- formal Education shall be to:-

Provide in-service, on-the-job, vocational and professional training for different categories of workers and professionals in order to improve their skills. Arising from the goals:

- I. Adult Educators should organize workshops to ensure that even Lecturers improve their teaching methodology to stimulate the thinking of the students to impact their world. This derives from the fact that problem-solving education is needed now in view of the numerous problems bedeviling the society.
- II. Students should be helped to develop the skills of enquiry learning so that on graduation they may be able to engage in skills geared towards self-reliance.
- III. Adult educators are expected to collaborate with other institutions within the country and abroad to develop more problems-solving.

Conclusion

This paper has taken a look at visualization as a teaching methodology that will enhance assimilation of knowledge by the students. In it, visualization has been extolled as capable of enhancing the problem-solving skills of students so that they can impact their world after graduation. Knowledge has been presented as an economic good which will add to the national development process and for this tertiary institutions are expected to develop more innovative teaching methodology by traversing the information superhighway.

The visualization methodology developed by Nwakaire (2008: 2009) in teaching three courses were presented as a means of sensitizing other teachers to concretizing abstractions and enhancing student's problem-solving skills. If this is accompanied with field trips, then it will be possible for the students, on graduation, to impact on their world positively.

References

- Bah L.A (1982), "Effective Teaching Techniques for an idea Teacher". England. Sussex Publisher, Danehills Haywards Heath.
- Fafunwa, A. B. (1974). History of Education in Nigeria, London, George Allen & Unwin Ltd.
- Federal Republic of Nigeria (2004), National Policy on Education – Goals of Tertiary Education, Lagos NERDC press
- Hornby, A. S. (2000). Oxford Advanced Learner's Dictionary of Current English. New York: Oxford University Press.
- Kobani, D. (2018). Adult Education: Methods and Materials. Port Harcourt: University of Port Harcourt Press.
- Kobani, D and Kpurunee, B.F. (2019). Prospects of Adult Education as a Programme of Study in Three selected Nigerian Universities, *Journal of Practice*, 10 (35): 48-53.
- Kobani, D and Kpurunee, B.F. (2021). Education for Self-Employment. An Appraisal of Rivers State University's Adult Education and Community Development Programme, *International Journal of Modern Innovation & Knowledge (IJMIK)*, 2 (3): 105-119.
- McKinsey & Company (2003). Rising to a Knowledge Management Challenge on a National Goal, the Leadership Forum 19-21 February 2003.
- Nwakaire O. N (2008). Lecture Notes on ADE 323, Community Development Theory and Practice II.
- Nwakaire O.N. (2009). Lecture Notes on ADE 421, Socio- Cultural Aspects of Community Development.
- Nwakaire O.N. (2009) Lecture Notes on ADE 424, Adult Education and Society II
- Sainta W. Harnetto, T.A and Strassnere, E (2003). Higher Education in Nigeria: A Status Report: Washington D.C. The World Bank.
- Salmi, J (2003). World Bank's Education Department
<http://www.worldbank.org/education>.

The World Bank (2003). Constructing knowledge Societies; New Challenges for Tertiary Education, Moscow. A new World Bank report March 25, 2003.