Accessibility of Interactive Instructional Media in The Delivery of Distance Education in South-East Nigeria

L'accessibilité De La Média Pédagogique Educatifs Interactifs Pour L'enseignement À Distance Dans La Région Sud-Est Du Nigéria

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Abstract

The purpose of the study was to determine the extent to which interactive instructional media are accessible and actually utilized in the delivery of distance Education programmes. The study was carried out in the south East Nigeria. A survey Research Design was adopted for the study. A research question and two hypotheses guided the study. 47,084 students of the National Open University of Nigeria (NOUN) and National Teachers Institute (NTI) Distance Education programmes in Abia and Enugu State study centres constituted the population for the study. With a stratified random sampling technique, a sample size of 393 distance learners from the NOUN and NTI centres were selected and studied. A researcher designed questionnaire, "Learners perceptions of Accessibility of Interactive Instructional Media Questionnaire" was used for data collection. The Instrument was validated by three experts; two in curriculum and instruction and one in measurement and Evaluation. The reliability co-efficient of the instrument was 0.76 obtained through Cronbach Alpha Method. The research question was tested using mean and standard deviations while the hypotheses were tested using t-test statistics. The data analysis revealed non-accessibility and under-utilization of the studied interactive

instructional media. There was no significant difference between the mean ratings of the Abia and Enugu study centre students' responses, but there was a significant difference between the mean ratings of the Noun and NTI students' responses. Based on the findings, it was recommended among others, that awareness, knowledge and skills acquisition training programmes on the accessibility and utilization of interactive instructional media should be severally organized to enable distance learning students and facilitators exploit the immense benefits and opportunities being offered by the current advancement in information and communication Technology.

Résumé

Le but de cette recherche était de déterminer dans quelle mesure les médias éducatifs interactifs sont accessibles et effectivement utilisés dans l'enseignement à distance. La recherche a été menée dans la région sud-est du Nigeria. Un plan de recherche par sondage a été adopté. Une question de recherche et deux hypothèses ont guidé la recherche. 47, 084 étudiants des programmes d'enseignement à distance de l'Université nationale de l'enseignement à distance du Nigéria (NOUN) et du National Teachers Institute (NTI) dans les centres d'études aux états d'Enugu et d'Abia constituaient la population utilisée par la recherche. Grâce à une technique d'échantillonnage aléatoire stratifié, un échantillon de 393 apprenants à distance des centres NOUN et NTI a été sélectionné et étudié. Un questionnaire a été utilisé pour la collecte de données. L'instrument a été validé par trois experts : deux en matière de programmes et d'enseignement et un en matière de mesure et d'évaluation. Le coefficient de fiabilité de l'instrument était de 0,76 obtenu par la méthode alpha de Cronbach. La question de recherche a été vérifiée à l'aide des écarts moyens et des écarts-types, tandis que les hypothèses ont été vérifiées à l'aide des statistiques du test - T. L'analyse des données a révélé la non-accessibilité et la sous-utilisation des médias pédagogiques interactifs étudiés. Il n'y avait pas de différence significative entre les cotes moyennes des réponses des élèves des centres d'étude Abia et Enugu, mais il y avait une différence significative entre les cotes moyennes des réponses des élèves Noun et NTI. Sur la base de ces conclusions, il a été recommandé, entre autres, que des programmes de formation à la sensibilisation, aux

connaissances et à l'acquisition de compétences sur l'accessibilité et l'utilisation des médias pédagogiques interactifs soient organisés séparément pour permettre aux étudiants et aux facilitateurs de l'enseignement à distance d'exploiter les immenses avantages et possibilités offerts par le progrès actuel des technologies de l'information et des communications.

Introduction

The essence of education for all irrespective of circumstances had been variedly underscored. The Universal declaration of human Rights adopted by the United Nations General Assembly provided for education as a fundamental right of everyone, (Ocho 2005). The Nigeria constitution under its fundamental objectives and directive principles also provided for equal and adequate educational opportunities, eradication of illiteracy and free adult literacy programmes, (FRN 2011). Nigeria in her National Policy on Education (FRN 2013) recognized; that Education is an instrument for national development and social change; that it maximizes the creative potentials and skills of the individual for self-fulfillment and general development of the society; and that education is compulsory and a right of every Nigerian irrespective of gender, social status, religion, ethnic background and any peculiar individual challenges;(P13). The Nigerian philosophy of education is thus õbased on the development of the individual into a sound and effective citizen and the provision of equal opportunities for all citizens of the nation at the basic, secondary and tertiary levels both inside and outside the formal school system.ö (P14)

The formal four walls education system cannot sufficiently provide equal and adequate educational opportunities for all, particularly in the face of varied circumstances of life. Hence the need for some forms of non-formal education system. One of such non-formal system is distance education.

Distance Education, according to National Policy on Education (2013), is the mode of education delivery.

a.   Where learners and teachers need not be in physical contact;
b.   Which possesses high range of flexible learning environment;
c.   That enhances access to tertiary education;
d.   That has the capacity to deliver Variety of skills; and
e.   Which uses a variety of media and technologies to provide quality education for large number of learners. (P63)

Although there are quite a number of other authoritative definitions, an analysis of the characteristic features of the distance education in sum reveals that;

1.   There is a quasi-permanent separation of the teacher and the learner in space and   or, time through the length and breadth of the teaching learning process. This feature distinguished it from the conventional face-to-face education.

2.   There is the influence of an educational organization or institution both in the planning and preparation of learning materials and in the provision of the students support services. Thus, it is distinguished from private study and teach-yourself programmes.

3.   There is the use of technological instructional media viz; print, tele-video, computer, electronic, internet, radio, and other devices. This feature replaces the interpersonal communication feature of the conventional oral group-based four wall education, and industrializes the educational process.

4.   Currently, there is a maximized use of ICT opportunities and which facilitates instructional communication. It now uses two-way interactive communication systems.

5.   Distance Education allows the learner independence and freedom of choice in terms of time, space, pace, medium, access and curriculum.

Distance education has the potential of accommodating students much more than all the existing Universities can accommodate. Through distance education, students who could not gain admission into the formal education, although they have the necessary qualification to pursue higher education, would be able to do so. Its flexible nature makes it appropriate for some other categories of students. Hence it provides tertiary education to workers, housewives, indigent members of the society and students who had to drop out of their education because of poor aptitude and motivation but who may later on become motivated. It is useful for young students in geographically remote areas and individuals who look upon education as a life-long activity.

Indeed it provides learning opportunities at various levels to people who do not have access to traditional modes for various reasons, such as, economic and time restrictions. Factors related to job and family responsibilities and distance from educational centres. Nwoge (2013) listed the advantages of Distance Education to include the facts that;

• It is flexible and gives the learner ample choice to determine when, how and where to take his studies;

• It provides viable alternatives to the conventional mode in our crisis-torn educational system. Distance learning provides stable environment and learning culture that is devoid of interruption arising from prolonged strikes;

• Since it is ICT driven, it provides spillover effects on the economy as more people are able to acquire Information Technology skills for the production of goods and services which enable them to contribute to national economic growth; etc.

Nakpodia (2010) also noted that the structure of distance learning gives adults the greatest possible control over time, place and pace of learning and that the usual tradition of face-to-face teaching could hardly meet the educational needs of all Nigerians. Ayo, Odukoya and Azeta (2014) equally observed that the system offers collaborative e-Learning which helps to improve the quality of education beyond the capabilities of the individual institutions. It depicts vividly, quality education without borders, as there is enhanced interaction and collaboration between students, faculties within and outside the

country based on the areas of competences of individual faculty and institutions. It offers a viable model for delivery of quality education based on ICT facilities (Internet, PCs, PDAs, iPods, mobile phones etc). (P64) They further noted that Distance Education is a formal education system that deploys ICT facilities to communicate, teach, coach and facilitate productive learning amongst students who are domiciled in distant locations. Such education system is said to be open because students are not limited by such conditions/factors like age, sex, pregnancy, work, race, religion and so on. It is an education that is open to all.(P63)

The national policy on education FRN (2013) acknowledged this essence of distance education. Hence, under its Mass Literacy, Adult and Non-formal Education programme, it provides for õthe provision of equivalent basic education for adults, children and youths of formal school age, outside the formal school systemö and the provision of;

a. *Functional basic education for adults and youths who have never had the advantage of formal education or who left school too early. The target groups include migrant folks. Almajiri pupils, illiterate and semi-literate adults, youths and adolescents; persons who left the formal school system early and are willing to come back and continue schooling; and other categories-of disadvantaged groups; who are unable to have access to the conventional educational system and therefore require other forms of educational programmes to cater for their particular/peculiar needs and circumstances;*
b. *Remedial and life-long education for youths and adults who did not complete secondary education; and*
c. *In-service, vocational and professional training for different categories of workers and professional in order to improve their skills. (FRN 2013:43).*

Distance education is a major means of achieving the above provisions of the National policy on Education.

Like in other parts of the world, distance education is not new in Nigeria. According to Ayo, Odukoya and Azeta (2014) the history of

Distance Education in Nigeria dates back to 1887 with the practice of correspondence education as a means of preparing candidates for the General Certificate in Education, a pre-requisite for London Marticulation Examination. In spite of the esterblishement of a university college in Ibadan in 1948, many of its academic staff passed through the higher degree programmes of the university of London as ÷distance learnersø To Okoye (2010) however, it began in the 1940s as correspondence studies. Many Nigerians got enrolled in the correspondence colleges in Great Britain and studied for various examinations including the General Certificate Examinations, Ordinary level and Advance levels, (GCE, OøLevel and GCE, AøLevel). In addition, there were those who studied for various technical, commercial and business examinations. The main mode of instructional delivery was the print media. This continued for a long time until some Nigerian Universities, through their institutes of Education, started distance learning programmes. Thus, it is obvious that Distance Education has for long existed in Nigeria, but in various forms. What is of interest however, is that the form of education is evolutional, that its structure and *modus operandi* changes along with the developmental stages; and that advancement in communication and information dissermination technologies influence its development, structure and method of operation.

There are quite a number of such programmes. Indeed almost every higher institutions in Nigeria currently runs one form of Distance Learning Programme or the other. However, the major Distance Education programmes in Nigeria are currently provided by the National Open University of Nigeria (NOUN) (Obioha and Udidi 2011) and the National Teachers Institute (NTI). In the South East geo-political zone, both the National Open University of Nigeria (NOUN) and the National Teachers Institute (NTI) have study centres where their respective distance education activities are coordinated. The NOUN has study centres; in Abia, Anambra, Enugu and Imo States of the South East zone of Nigeria. The NTI also has a regional headquarter at Enugu and a state coordinating office and study centres in all the five states of the zone. Such academic activities as student guidance counseling, distribution or provision of accesses to instructional media,

and occasional contact meetings for tutorial and socialization purposes are carried out at the study centres of the programmes.

A reference to Item No 3 of the summary of the features of distance Education and item õeö of the definition of Distance Education in the National policy of Education as presented above indicate that the uses of technological instructional media or information communication technology (ICT) and with particular reference to two-way interactive communication systems is a sine-qua-non in the distance education programme, if the distance education would compare with the oral group based, face to face, four wall, conventional education system in standard and effectiveness. Interactive instructional media consist of those communication technologies that provide for a two-way interaction between the teacher and the learner and among or between the learners. Such media provide opportunity for interaction between the teacher and the learner, and among or between the learners irrespective of their varied locations. According to kumar (2008), these technologies are not single technologies, but a combination of hardware and software media and delivery systems. They include various forms of electronic conferencing; teleconferencing, audio-conferencing, video-conferencing, E-Learning, internet learning, and others. The interactive instructional media employs the use of multimedia, interactive electronic systems and software tools to provide ±Teacher-student interactionø ±Student-student interactionø and ±student-instructional media interaction±to make learning active and participatory. It creates a kind of virtual classroom which bridges the gap in the inter-personal relationship caused by the physical separation between the teacher and the learners. It thus brings the distance education at par or close to what is obtainable in the regular four-wall, face-to-face educational system.

Distance Education is a formal education system that deploys ICT facilities to communicate, teach, coach and facilitate productive learning amongst students. (Ayo et al 2014) Interactivity is a key determinant of students success rate. Majority of the students are workers in the urban areas who combine õwork and learnö which is the motto of NOUN. The students depended on their facilitors as key resource persons and on their peers or study groups both for required

and voluntary interactivity to reinforce their learning. This was able to reduce loneliness, boredom and loss of community experienced in distance education. (Terhemba 2018) NOUN is aware of this hence it made provision that all NOUN centres are expected to have Local Area Networks (LAN) with a minimum of 20 computers and which should be connected to the Repository, Production, Distribution, and Administration Headquater (REPRODAhq) and further connected to the National Wide Area Network (WAN) using VSAT solutions for delivery of distance learning to all study centres. This arrangement obviously is meant to enhance access to ICT usage including Interactive Instructional Media. However the extent to which the NOUN has equipped the study centres with up-to-date technology facilities, is not certain. If the facilities are not their accessibility which is dialectically linked to interactivity may be frustrated.

The application of these interactive media in the delivery of distance education is a sine qua non. Indeed, distance education should currently be sustained by the use of available sophisticated two-way interactive information communication technologies. It however seem to be facing a number of challenges. There is still a dearth of interactive media compared to the print and other non-interactive media (Kumar 2008); the students access to interactive technology is still limited (Mangal and Mnagal, 2010:795); and because NOUN has not completed its Repository, Production, Distribution, and Administration Headquarters (REPODAhq) and equipped the study centers with up-to-date technology facilities, accessibility that is dialectically linked to interactivity, is frustrated (Terhemba 2018). Nigeria suffers the challenge of access to quality education occasioned by poor funding and inadequate manpower and infrastructure. Equally, despite the proliferation and observed benefits of Distance Education in Nigeria, the provision of adequate infrastructure and quality of delivery of instruction has been a major concern to stakeholders. To this effect, the National Universities Commission (NUC), in an attempt to ensure that standards are maintained in the operation of distance education had to enact some regulations. One of such is the stipulation that the ODE study centres should offer both academic and social support services; Students should have easy access to ICT facilities for learning purposes. (NUC, 2013).Thus the need for standard is apparent.

Observations tend to indicate deficiency in the use of Information and Communication Technology (ICT) facilities and with particular reference to interactive media.

Thus, the extent of accessibility of such instructional media is however subject to variation in relation to place, time and circumstances. In other words, the accessibility, of the media, at different locations, times and prevailing circumstances are not universally the same. There are still problems of social acceptance of Distance Education products, underutilization of information communication technologies (ICT) due to epileptics power supplied, lack of skills in methods and principles of usage and other accessibility problems particularly in the rural locations. Thus, the interactive media with particular reference to ensuring quality distance education needs to be adequately evaluated. This study thus tried to ascertain learnersø perceptions of the accessibility of interactive instructional media required for effective distance education.

Purpose of the Study
The purpose of the study was to determine the learners perceptions on the accessibility of the interactive instructional media available for the implementation of distance education programmes in Nigeria with particular reference to NOUN and NTI programmes in South-East Nigeria.

Research Question
The following research question guided the study
i.   What are the learnersø perceptions on the accessibility of interactive instructional media available for distance education programmes in the South-East Nigeria?

Hypothesis
The following hypotheses also guided the study.
H_{O1}:   There is no significant difference between the mean responses of NOUN and NTI learners on the accessibility of interactive instructional media   available for distance education in the South-East Nigeria.

H$_{O2}$:   There is no significant difference between the mean responses of Abia State and Enugu State distance learners on the accessibility of interactive. Instructional media available for distance education in the South-East Nigeria.

Method

The study was carried out in the South-East Geopolitical Zone of Nigeria. A survey research design was adopted for the study, i.e a design in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be a representative of the entire group (Nworgu, 2006) The students of the National Open University of Nigeria (NOUN) and National Teachers Institute (NTI) in the South East Zone of Nigeria constituted the population of the study. The total population studied is 47,084 students. However, a sample size of 393 students, made up of 170 and 223 students of NOUN and NTI programmes respectively was actually studied. Stratified (proportionate) random sampling was used in selecting the sample size. The selection was determined by the use taro Yamani¢s sample size selection formula. A researcher designed Questionnaire was used as instrument for data collection. The instrument was validated by three experts, two in curriculum and instruction and one in measurement and evaluation. The reliability coefficient of the instrument was 0.76 obtained using Cornback Alpha method. The research question was then answered using mean with standard deviation while the hypothesis was tested using t-test calculated at 0.05 level of significance. In the data analysis, the decision rule for research questions was 2.50 arrived at by calculating the average of the four-point scale thus;

$$\text{Average} = \frac{4+3+2+1}{4} = \frac{10}{4} = 2.50$$

While the decision rule for the hypothesis was that where the calculated t-value is equal to or greater than the critical t-value, the null hypotheses were rejected; but where the calculated t-value is less than the critical t-value, the null hypotheses were not rejected.

Results

The results of the study are as follows:

Research Question

What are the learner's perceptions on the accessibility of interactive instructional media available for distance education in South-East Nigeria?

Table 1: Mean ratings of student's perceptions on the accessibility of interactive instructional media available for distance education in South East, Nigeria.

n = 364

S/N	Indicate whether you easily access, receive or participate in lectures delivered through each of the following	$\overline{X}$	SD	Decision
1	Audio conferencing	1.51	1.02	Not Accessible (NA)
2	Video conferencing	2.00	1.00	NA
3	Teleconferencing (Telephone)	1.22	0,97	NA
4	Audio-graphic conferencing	1.21	0.84	NA
5	Computer conferencing	2.52	0.99	Accessible (A)
6	Web conferencing	2.53	1.01	A
7	Multi-media	2.59	0.96	A
8	Online Chat (web chat or instant messaging	1.19	0.92	Not accessible (NA)
9	Application Sharing	1.24	0.88	NA
10	Blog (weblog)	1.15	0.91	NA
11	Webcam	1.16	0.89	NA
12	podcasting	1.33	1.05	NA
13	Wiki application system	1.64	0.95	NA
14	E-mail	2.01	0.98	NA
15	Faxing	1.71	1.10	NA
16	Skype	2.03	1.12	NA
17	WhatsApp	1.11	0.76	NA
18	Screen cast	1.12	0.83	NA
	Grand Mean & SD	**1.63**	**0.53**	**Not Accessible(NA)**

Table 1 shows that high mean ratings of 2.52, 2.53 and 2.59 were obtained for items 5, 6 and 7 respectively, indicating that the respondents perceived those items (computer conferencing, web conferencing, and multi-media) as being accessible. On the other hand, low mean ratings (I.II-2.00) were obtained for the remaining 15 items, indicating low accessibility. A grand mean of 1.63, with standard deviation of 0.53, was obtained for all the 18 items, thereby indicating that the respondent generally perceived the interactive instructional media systems as not being accessible. The relatively low standard deviation (0.53) is indicative of the fact that the respondents did not differ remarkably in their opinions regarding the accessibility of the various instructional media systems.

Hypothesis 1
There is no significant difference between the mean ratings of NOUN and NTI learners on the accessibility of interactive instructional media available for distance education in the South-East, Nigeria.

Table 2: t-test analysis of mean perception ratings of NOUN and NTI learners on the accessibility of interactive instructional media available for distance education in the South-East, Nigeria.

Distance Edu. Prog.	N	$\overline{X}$	SD	df	t-cal	t-crit	Decision
NOUN	154	1.84	0.98	362	4.16	1.96	Reject H_O
NTI	210	1.42	0.93				

Table 2 shows that the calculated t-value, at 0.05 level of significance and 362 degree of freedom, is 4.16 whereas the critical t-value is 1.96 under the same conditions. The null hypothesis is then rejected, since the calculated t-value is greater than the critical t-value. This means that a significant difference actually exist between the mean ratings of learners in NOUN and their counterparts in NTI regarding the accessibility of interactive instructional media available for distance education programmes in the South East, Nigeria.

Hypothesis 2
There is no significant difference between the mean ratings of Abia State and Enugu State learners on the accessibility of interactive instructional media available for distance education programmes in the South-East, Nigeria.

Table 3: te-test analysis of the mean ratings of learners in Abia State and their Enugu State counterparts on the accessibility of interactive instructional media available for distance education in the South East, Nigeria.

State	N	x	SD	df	t-cal	t-crit	decision
Abia	208	1.69	0.88	362	1.32	1.96	Do not reject
Enugu	156	1.57	0.84				H_O

Table 3 shows that the calculated t-value, at 0.05 level of significance and 362 degree of freedom, is 1.32 as against the critical t-value of 1.96. The null hypothesis is therefore not rejected since the calculated t-value is less than the critical t-values. This means that there is actually no significant difference between the mean ratings of learners in Abia State and their counterparts in Enugu State regarding the accessibility of interactive instructional media available for distance education programmes in the South-East, Nigeria.

Discussion of findings

The findings of the study is that the interactive instructional media available for the implementation of the distance education programmes perceived to be generally inaccessible. The analysis of the 18 items meant to answer the research question with regards to the accessibility of interactive instructional media showed high mean ratings of 2.52, 2.53 and 2.59 on item numbers 5, 6 and 7 i.e. computer conferencing, web conferencing and multimedia respectively but very low ratings of 1.11-2.00 on the other 11 items. There is also a grand mean of 1.63 with standard deviation of 0.53 for all the 18 items. Thus, the respondents generally were of the opinion that the interactive instructional media systems were not accessible. The relatively low standard deviation is equally indicative of the fact that the respondents did not differ

remarkably in their opinions. This finding agrees with the findings of the earlier works of Adebayo (2010), Ekpeyong (2011) and Maduabuchi (2012). Out of the instructional media researched on by the authorities, the ones available and accessible were such media as science kits, chemical specimen, chalkboard, classroom halls, and other such non interactive media. The electronic interactive media were generally inaccessible. The authorities above all equally discovered that the electronic interactive media, where available were usually inaccessible. The reasons adduced for the inaccessibility include such facts as paucity of access facilities, locational geographic circumstances, poor or inadequate knowledge of the use of the media by both teachers and learners and others.

The internet server operations, for instance, are practically affected by location circumstances. The finding is also in line with the discovery of Ayo et al (2014), that the mode of teaching was still predominantly face-to-face, with little or no use of ICT facilities. Consequently, students living in remote locations and those undergoing peculiar conditions, like the pregnant women, nursing mothers, workers, husbandry farmers [etc] could hardly participate. The opinions of such authorities as Mangal and Mangal (2010) and Broadmand (2012) who are of the opinion that the advancement in the development of information communication technologies (ICT) and facilities has made quite a large number of interactive media systems available and accessible may be true to some extent but obviously not generally practically applicable in all locations and circumstances. One fact which may have informed this opinion and other opinions on accessibility is that availability and accessibility are intertwined.

People do not normally differentiate accessibility from availability and to some extent utilization. Probably this is why most research works in this regard are on availability and utilization and nothing on accessibility. Accessibility is only often mentioned in passing while discussing availability and utilization. Distinctively, however, accessibility denotes access road or ability to use an available facility. For instance, a learner may wish to obtain information from available internet system, but the internet server may not be functional in his location or he may lack the necessary knowledge and skills to operate

the systems. This is a factor of accessibility. On the other hand, Availability denote physical existence while utilization has to do with application.

A significant difference exist between the perceptions of the learners in NOUN and their counterparts in the NTI regarding the accessibility of interactive instructional media for distance education. The t-test analysis of the difference between the perception ratings of the NOUN and NTI on accessibility presented in table 3 showed that the calculated t-value, is greater than the critical t-value thus indicating a significant difference. The reason for this discovery may not be far-fetched. For one, historically, the reason for setting up the programmes, the orientation structure and ‗modus operandi' of the two programmes may be similar but not exactly the same. The NTI programme was actually initiated to provide opportunities specially for practicing teachers to remedy their professional deficiencies and for professional growth. Structurally, co-ordinating and study centres are scattered at states and at various local levels bearing the intended learners in mind. Most of the study centres have little or no facilities that can support interactive media systems. The access abilities and facilities for interactive media is almost zero. The media in use are non-interactive, mainly course modules, textbooks and contact sessions. The NOUN is a beat different. It is meant to serve people of all professions and age levels, who have to work and learn as it suits their circumstances. The centres are located in the urban areas where facilities that can support interactive media systems exist. The use of interactive media systems was equally a primary consideration in the establishment of the NOUN. There is however, no significant difference between the mean ratings of learners in Abia and their counterparts in Enugu State regarding the accessibility of interactive media. The finding is in line with the earlier discoveries of Adebayo (2010). The structure, method of operation and circumstances of the programmes are similar in all states and centres.

Conclusions

1.   The interactive instructional media necessary for distance education programmes are not accessible due to (i) Ignorance of the existence of such facilities (ii) absence or inadequate

knowledge and skills required for access and utilization of the media and (iii) Paucity of application enabling or enhancing facilities and environment. Etc.

2.   There is a beat of significant difference in the instructional delivery systems of the NOUN and NTI distance education programmes. While the NOUN can boast of little extent of some form of accessibility of interactive instructional media, the NTI is still predominantly practicing the contact centre, tutorial and module form of the Distance Learning System.

Educational Implications of the Study

The findings of this study have far reaching implications for the Nigerian education system in general and with particular reference to the distance education. Some of such implications include:

1.   Distance education is currently in vogue. It is playing both complementary and alternative roles in providing educational opportunities for various categories of learners. It is particularly helpful in providing solutions to the problems of insufficient carrying capacities and admission policies of the formal four wall educational system. Of course, the essence of the distance education in the Nigerian education had been severally underscored. In fact, it is even feared that it may be displacing the formal system in no distant time. Such a system that mounts so much displacement or alternate pressure on the current formal educational system or that plays so much complementary roles, implies some serious educational concern. It implies great demands on the effective planning and development of the *'modus operandi'* and other factors affecting the over-all quality of the distance education system. If it has to compare in ‗*on all fours'* with the traditional system, then serious educational efforts should be geared towards a quality assurance of the distance system.

2.   Instruction is the primary business of every educational system. The means and methods of attaining effective instruction and instructional communication is therefore of serious educational concern. For effective distance educational instruction,

interactivity as should normally be provided by two-way interactive instructional media has been established as a basic element. Thus, where the interactive instructional media are not accessible, instruction will naturally not be effective. The quality of such an educational system will in effect be anything else but of standard. Hence, there is an immense need to improve on the provision of facilities for two-way interactive instructional systems required for appropriate distance education.

Recommendations

Based on the findings of the study, the researcher recommends as follows:

1. Distance education of right quality, in this technological age, can only be delivered by the use of interactive instructional media and other contemporary information communication technologies capable of creating near similar natural classroom environment. Providers of distance education should do everything possible to make instructional media required in distance education instructional delivery, accessible to learners and facilitators.

2. Awareness, knowledge and skill acquisition training programmes for interactive media should be enshrined into the curriculum and implemented at all levels of the Nigerian educational system. This will equip teachers and learners with the knowledge and skills that enable one to identify and use interactive and other contemporary two-way information communication technologies. This is informed by the fact that much of these interactive instructional media are available but unknown to the learners and resource persons of distance education programmes.

3. The government should provide necessary and accessible infrastructural facilities, as well as men and materials that are capable of supporting the use of interactive instructional media in both rural and urban areas of the country. This will enable distance education learners to have access to interactive and other modern instructional media for quality distance education.

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