ANALYSIS OF FACTORS AFFECTING THE EFFECTIVENESS OF DISTANCE LEARNING MODE IN THE PREPARATION OF TEACHERS IN COLLEGES OF EDUCATION, NIGERIA

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Abstract: *Distance learning education has been considered as a viable tool which not only helps in solving the problem of shortage of teachers but also the high attrition rates that is often associated with study leave. It was believed that distance education has the capacity to prepare qualified teachers just as the face-to-face education mode. However, there seem to be gaps between the objectives establishing distance education and their realization. The obvious indicators to this fact are the unqualified teachers who cannot express themselves in the classroom. The study explored the factors affecting the effectiveness of distance learning mode in the preparation of teachers in Colleges of Education, Nigeria. The researcher constructed 30 questionnaire items from the literatures relevant to the study. The questionnaire yielded a reliability coefficient of 0.83. A total of 151 questionnaires were administered on 38 and 113 lecturers and students of College of Education, Minna and Mokwa study centers. All the questionnaires were completed and retrieved. The study revealed that all the constructs constituted factors affecting the effectiveness of distance learning mode of education in the preparation of teachers in Colleges of Education in Nigeria. It was concluded that the nation will continue to be in dire need of adequate qualified teachers if the factors affecting the effectiveness of the programme are not eliminated. It was recommended among others that institutions establishing distance learning programmes should ensure that the needed facilities for the effective running of the programme are properly put in place. Facilities such as; technologies that will create interactive learning environment even at a distance.*

Keywords: *College of Education, Distance Learning Mode, Teachers Preparation*

1. INTRODUCTION

Teaching as a subject has for years attracted the attention of researchers on education at whatever level- primary, secondary or even tertiary-level, and using whatever delivery method, whether face-to-face teaching, distance education or mixed mode approaches. It is generally considered that the way teachers are trained to acquire knowledge and skills is bound to influence how learning will be imparted to the pupils and how learning outcomes will be affected. Distance education has been witnessing unprecedented expansion in the recent past and is now recognized as a proven means of extending to a large number of aspirants, access to educational provisions, right from primary to tertiary levels in most countries of the world. Since its inception a century before, it has metamorphosed itself considerably from correspondence education to virtual education (Butcher, 2003). In line with this, Sampong (2009) opined that distance education programmes are being offered with the help of a plethora of interactive media – printed material, audio-video programmes, teleconferences, internet, academic counseling, assignments, face-to-face workshops, project

work, practical works. However, these technologies may influence learning in unanticipated ways if used without understanding the implications for student learning (Zhao, Lei, Yan and Tan 2004).

Distance education is currently experiencing great growth in new applications of interactive technologies, but we have no guarantees that without critical reflection on our practice, we will produce any significant growth toward transformative learning, toward the development of personal empowerment and critical abilities to question rather than to accept assumptions, beliefs and expectations about one's role in the World' (Burge and Haughey 2003). Hence, it is assumptions which have driven distance education theoreticians and practitioners to believe that different distance education technologies induce student learning. Although such assumptions may be true, they need to be empirically validated.

Distance Education (DE) is defined as an educational process in which the learner is separated from the instructional base or teacher either in space and/or time for a significant proportion of his learning (Association for the Development of Education in Africa, (ADEA) 2000). Open learning, in turn, is a philosophy of learning based on the principle of flexibility to increase access and equity to education and training. It is an organized educational activity that uses a variety of media and/or teaching aids in which put constraints on study are reduced in terms of access, or of time and place, pace, method of study, or any addition of these (Perraton, 2002). Also, Wisher, Sabol and Moses (2002) defined distance learning education as a method of instruction in which the students are not needed to be physically present at a specific location of the school during the term. Distance learning is any system where teaching behaviours are separated from learning behaviours. The learner work alone or in a group, guided by study materials arranged by the instructor with the aid of a range of media (such as text, telephone, audio, video, computing and internet technology and others). Distance learning may be combined with various forms of face-to-face meetings (Thorpe, 2003). Looking at all these definitions, distance learning could be seen as all situations where learners and instructors are not together as they would be in a traditional setting. Thus distance learning can occur in many configurations. It can be synchronous (instruction delivered and received simultaneously) or it may be asynchronous (instruction delivered and received at different times).

Nowadays, it is acknowledged that Distance Education is very appropriate to reach widely spread teacher populations without affecting their professional, personal, and social lives. It is best in the countries where face to face institutions cannot respond fast and adequately to growing demands for teacher education due to inadequate of space and facilities. Due to the introduction of Free Primary Education in some states of the Federation, there is high enrolment rate of some of these projects augurs well for the future of distance education for primary school teacher development. According to ADEA (2004), in 1994, 21,000 trainees graduated through the distance-run National Certificate in Education (Nigeria), a figure comparable to the total admissions of 58 colleges of education. For these reasons, among others, distance education as a delivery mode was recommended by the World Conference on Higher Education (Paris,1998), the World Forum on Education in Dakar, 2000 and the ILO/UNESCO Committee on the Application of the Recommendations concerning the Status of Teachers in Geneva, 2000.

However, although in terms of pedagogical and professional efficiency, on the job continuing training through distance education optimizes the opportunity to apply knowledge and skills acquired immediately in classroom situations. In many African countries, distance education

is generally considered as second-best or second-chance education and in a few cases, as a "face-saving" strategy in response to educational crisis. The long tradition of face to face training of teachers has no doubt contributed to the mixed feelings about distance education

Print media remain the predominant medium in Nigeria although the use of other technologies is not excluded. Programmes in Nigeria combined the use of printed materials, tutorials, and teaching practice supervised by educators from local higher education institutions. Learner support is provided during the weekends and school vacations in study centres spread across the country (Nigeria) some of which are equipped with learning resources including audio-visual materials.

There is no doubt that distance learning has great potential for knowledge dissemination and preparation of teachers. According to Rio-Cidoncha, Martinez-Palacios and Martinez-Lomas (2008), the use of distance learning in teaching-learning process allows the students and the teachers to overcome the time and space constraints which are present in traditional classroom teaching. Furthermore, distance learning offers good opportunities of preparing teachers (Lefebvre, Deandeline and Loiselle, 2006). In agreement with Moallem (2004) earlier argued that distance education mode has the capacity to be compared with the face-to-face learning mode of education as it can be used to run even the practical based courses if the identified hindrances are eliminated. However, Perraton (2002), Rumajogee, Jeeroburkhan, Mohadeb and Mooneesamy (2003) and Sampong (2009) all agreed that as good as the programme (distance education) is, it has been plague with diverse factors affecting its success, ranging from facilities and supervision. To ensure comparability of standards, continuous assessments course examinations moderated by External Examiners of regular programmes of Colleges of Education are held twice annually. Results of distance education students are comparable to and in some cases, even better than conventional students (ADEA, 2003).

Open and Distance Learning (ODL) gives learners control of the time, place, and pace of learning and often being characterized as flexible learning. However, this flexibility goes hand-in-hand with procrastination and non-completion. (Tattersall, Waterink, Höppener, and Koper, 2006).

2. THE PROBLEM

With the introduction of distance learning education which is believed to solve not only the problem of shortage of teachers but also the high attrition rates often associated with study leave. In addition, the Ministry of Education desired to ensure that teachers do not move from their duty stations to seek further education development. They could stay at their place of work and learn through integrating college work with their teaching work (Tucker, 2001). Distance learning education has the potential to support high attrition rates of teachers and greatly reduce the migration of teachers from secondary school to tertiary institution after they possessed higher qualifications and additional experience.

According to ADEA (2003), high drop-out rate from distance education was 39% between 1997 and 2000 in Nigeria. This drop-out rate is related to un-affordability of course materials, time constraints because of competing priorities especially during examination period, late delivery of materials, long distance travel to study centres, failure to participate in compulsory practicum, lack of learner support, lack of learning resources in study centres, lack of quality tutors, tutoring being assimilated to traditional teaching, lack of interaction between learners and tutors. So far the success and failures of distance education for teacher

education have been thinly documented. It is as a result of this reason that this study investigates the factors affecting the effectiveness of distance learning mode of education in the preparation of teachers in Colleges of Education in Nigeria.

2.1 Research Questions

What are the factors affecting the effectiveness of distance learning mode of education in the preparation of teachers in Colleges of Education in Nigeria?

2.2 Research Hypothesis

There is no significant difference between the responses of teachers and students regarding the factors affecting the effectiveness of distance learning mode of education in the preparation of teachers in Colleges of Education in Nigeria.

3. METHODOLOGY

The population for the study consisted of 125 lecturers made up 115 lecturers from College of Education, Minna Niger State and 15 lecturers from Mokwa Study Centre of Distance Learning of College of Education, Minna. The second group that constituted the population was 376 NCE students of distance learning mode, Mokwa Study Centre. It is the belief of the researcher that the lecturers and distance learning mode students of Colleges of Education are in a better position to understand and appreciate the issues affecting the effectiveness of distance learning mode of education in the preparation of teachers in Colleges of Education in Nigeria.

The sampling procedure adopted for the study was proportionate stratified random sampling technique. The lecturers and students are the identified strata. A sample of 30% of each stratum totaling 38 and 113 of lecturers and students respectively were selected for the study.

A structured questionnaire designed by the researcher with a split-half reliability coefficient of 0.83 was used to gather data for the study. The questionnaire was made up of thirty five (35) carefully designed items after an extensive review of literature. The items are placed on 4 point rating scale of Strongly Agreed (SA) SA = 4, Agreed (A) = 3, Disagreed (D) = 2, and Strongly Disagreed (SD) = 1. One hundred and fifty one (151) questionnaires were administered and collected.

The data collected to answer the research question were analysed using mean, standard deviation and ranking. The mean rating of 2.5 was used for decision regarding the research question. This was calculated based on the 4 point rating interval used in the study. Items with mean values of 2.5 and above were considered as agreed while items with mean values below 2.5 were considered as disagreed. The hypothesis was tested using Mann Whitney U-test statistic at 0.05 level of significance.

4. DATA ANALYSIS AND RESULT

4.1 Research Question

What are the factors affecting the effectiveness of distance learning mode of education in the preparation of teachers in Colleges of Education in Nigeria?

Table 1: Mean and Ranks of Factors Affecting the Effectiveness of Distance Learning Mode in the preparation of Teachers N_1=38, N_2=113

S/N	Items	$\overline{X}_1$	$\overline{X}_2$	$\overline{X}_t$	Ranks
1	Lack of adequate furniture for learning to take place.	3.12	2.69	2.91	18th

2	Late delivery of materials	2.67	3.50	3.09	7th
3	Lack of communication equipment.	2.78	3.66	3.22	5th
4	Non availability of computers with internet connectivity.	3.54	3.69	3.62	2nd
5	Un-affordability of course materials	3.01	3.07	3.04	10th
6	Data collected about the programme are not analyzed and not use for the improvement of the programme	2.72	3.68	3.20	6th
7	Poor turnaround time of students' assignment.	2.89	3.01	2.95	16th
8	Time constraints because of competing priorities.	3.12	2.98	3.05	9th
9	Learning and assessment methods are not appropriate to the purpose and outcomes of the programme	2.61	2.92	2.77	23rd
10	The courses are incoherently designed and packaged.	2.76	9.98	2.87	19th
11	The content of the courses and practice of instructors discourage collaborative learning	2.90	3.72	3.31	4th
12	Lack of quality tutors	2.78	2.75	2.77	23rd
13	The course materials are inaccessibly presented	2.56	3.02	2.79	22nd
14	Tutoring being assimilated to traditional teaching	2.87	3.05	2.96	14th
15	Lack of learning resources in study centres.	3.78	3.45	3.62	2nd
16	Poor presentation of information in the course materials.	3.45	3.82	3.64	1st
17	There is no identified process of evaluation of course materials	2.51	2.92	2.72	28th
18	The course materials does encourage students to exercise their inquiry abilities the use of constructivist approaches	2.89	3.18	3.04	10th
19	The course materials take into does consideration different learning styles of students	276	3.41	3.09	7th
20	Lack of learners' support.	253	2.96	2.75	25th
21	Difficulty in securing counseling services.	261	3.31	2.96	14th
22	The manuals are not easy to read and understand	2.71	3.19	2.95	16th
23	The graphics in the manuals are not clear and self-explanatory	2.64	2.85	2.75	25th
24	The examples in the manuals are not realistic to teacher's experience in the classroom.	2.78	2.58	2.68	29th
25	Graded assignments are not returned in a reasonable length of time.	2.59	2.90	2.75	27th
26	Difficulty in communicating with the course tutor concerning studies.	2.63	2.97	2.80	21st
27	Failure to participate in compulsory practicum	2.95	2.74	2.85	20th
28	Lack of efficient administrative systems support.	2.78	2.50	2.64	30th
29	Supervisors do not often visit student-teacher's classroom	2.76	3.23	3.00	12th
30	Supervisors' reports are not used to improve program	2.90	3.07	2.99	13th

N_1 and N_2 = Number of Students and Teachers respectively.

$\overline{X_1}$ =Mean responses of Students; $\overline{X_2}$ = Mean responses of Teachers

$\overline{X_t}$ = Mean responses of all respondents

$$X_t = \frac{\overline{X_1} + \overline{X_2}}{2}$$

Table 1 revealed that the respondents unanimously agreed that all the factors in the table affect the effectiveness of distance learning mode of preparing teachers since all the means of both the teachers and students ranged between 2.50 and 3.64 with poor presentation of information in the course material and lack of facilities at the forefront.

4.2 Hypothesis: There is no significant difference between the responses of teachers and students regarding the factors affecting the effectiveness of distance learning mode of education in the preparation of teachers in Colleges of Education in Nigeria.

Table 2: Summary of Mann Whitney U-test on the mean response of teachers and students on factors affecting the effectiveness of distance learning mode of education in the preparation of teachers

Group	N	Mean	SD	Z-cal.	Z-crit.	Df	Decision
Teachers	38	2.53	0.43				
Students	113	2.49	0.42	1.24	1.96	149	NS*

P>0.05

Keys: N = Number of Respondents; SD = Standard Deviation; Df = Degree of Freedom; NS = No Significant

The result of Mann Whitney test in Table 2 showed that the calculated Z-value of 1.24 was less than the critical value of 1.96 and observed p-value was greater than the fixed p-value (0.05). Therefore the null hypothesis which states that there is no significant difference between the responses of teachers and students on the factors affecting the effectiveness of distance learning mode of education in the preparation of teachers in Colleges of Education in Nigeria was rejected. This means that both teachers and students agreed on the items listed as factors affecting the effectiveness of distance learning mode of education.

5. Discussion

The findings of this study showed that both teacher and students respondents agreed on 25 constructs out of 32 items as factors affecting the effectiveness of distance learning mode of preparing teaching teachers in Colleges of Education. The implication of this finding is that most teachers and students are aware of the factors undermining the effective preparation of teacher in this mode of education (Distance Learning). On the items relating to lack of adequate furniture, communication equipment, and computers with internet connectivity, the study found that these major facilities in the running of any distance learning programme are lacking in the study centers in Nigeria. The factors regarding facilities in table have second highest ranking. This view was supported by Allen, Bourhis, Burrell and Mabry (2002) who found that facilities are the key elements to the success of any distance learning programme and regrettably many distance learning centers are poorly equipped. Also, Sampong (2009) identified issues that need to be addressed in distance learning centers and stressed that the first issue that is needed to be addressed is the unavailability of computers with internet services at the study centers, which were intended to enhance research work, easy communication among students and between students and course instructors. This concerned for both students and teachers groups given that this item received a high response from both groups and ranked. No wonder Butcher (2003) opined that technological infrastructure and the use of ICT in education in Nigeria and Africa at large is very poor.

On the items concerning the course material; late delivery of materials, un-affordability of course materials, course materials are inaccessibly presented, course materials does not pui into consideration learners ability and different learning styles of students, the manuals are not easy to read and understand, the graphics in the manuals are not clear and self-explanatory, the examples in the manuals are not realistic to my experience as a teacher, the study found that the respondents agreed that all these items affect the effectiveness of the distance learning programme. This finding was supported by Tait (2003) who found that information in course materials for distance learning programme are adequate but the mode

of delivery is poor and unaffordable to the students. Buttressing this view ADEA (2004) stated that the high rate of dropout in distance learning in Nigeria was attributed to factors like un-affordability of course materials to students, late delivery of materials and difficulty in understanding the content of some course manuals.

The analysis of items on lack of efficient administrative systems support, supervisors do not often visit student-teacher's classroom, supervisors' reports are not used to improve program, lack of learners' support and difficulty in securing counseling services revealed that both teachers and students agreed on this items as factors affecting the distance learning programme. Supporting this finding, Thorpe (2003) agreed that learners need support in two different areas, such as institutional systems and course materials. Institutional systems support includes publishing courses materials that are available, how to apply, how to make payments and others, before, during, and after the course of study. Course materials support includes answering learners' questions on ways course material will make sense to the learner, how to complete a particular course work, how to reach other students, and other services that are related to the students, but most distance learning programme have failed in these two support systems. On the items concerning lack of quality tutors, learning and assessment methods are not appropriate to the motive and outcomes of the programme of study, tutoring being assimilated to traditional teaching, graded assignments are not returned in a reasonable length of time, failure to participate in compulsory practicum, it was found that the respondents agreed on all the items except on the item that graded assignment are not returned in a reasonable time. In line with this finding, Moallem (2004) found that the tutoring and assessment aspects of most distance learning programme are faulty. Contradicting this notion, ADEA (2004) stated that the pedagogical aspects of distance learning programme are standard. In agreement with Moallem, Perraton (2002) found that assessment of distance learning mode is not reliable like that of face-to-face mode.

6. CONCLUSION

The study analyzed the factors affecting the effectiveness of distance learning mode of preparing teachers in colleges of education in Nigeria. It was very clearly stated that there is a need to raise the number of train professional teachers in the country to cope with the educational expansion in the country. To achieve this, quality distance learning programme is crucial and this is only possible when the factors affecting the effectiveness of distance learning identified in this study are eliminated. If not the country will continue to be in dire need of adequate qualified teachers.

6.1 Recommendations

Based on the findings of this study, the following recommendations are made:.
There is the need for institutions establishing distance learning programmes to ensure that the needed facilities for the effective running of the programme are properly put in place. Facilities such as new eLearning technologies are urgently needed to create interactive learning environment for distance learning.Without self-direction and independence, distance learners cannot successfully achieve their aims and objectives; therefore, it is necessary that providers of distance education ought to develop a deliberate policy that will develop these attributes in their clients. Distance education providers should include more learner-centered approaches into their teaching methodology. This will empower distance learners to master their learning and to take more responsibility for their own success. Generally, the findings of this study agreed that distance education can be very effective with reasonable investment in planning and time. The major areas of course production, administration, class supervision,

learner support, choice of appropriate instruction aids, evaluation, and the output of student achievement require adequate investment in resources and planning.

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