

Differential Levels of Challenges in Training Teachers through Distance Education in Ghana

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Abstract

This was conducted to find out the challenges facing universities that are using distance education to train teachers in Ghana. The design used in the study was descriptive survey. Purposive and simple random sampling techniques were used in selecting the 11 study centres, 285 students and 43 course tutors for the study. A 39 item questionnaire was used to collect data. The items yielded a reliability $r = 0.87$. Four hypotheses were formulated and tested at 0.05 level of significance using ANOVA and Post Hoc test multiple comparisons. The study revealed statistically difference among respondents in terms of using working hours to study, financial cost of the programme, and having access to libraries. Others are job funding, cost of technology, inadequate technology, competent staff, developing curriculum for distance education, and the quality of study materials. It is recommended that since all the agencies involved are training teachers through distance education, they should be meeting occasionally to exchange ideas in order to address the differences in the challenges facing them.

Keywords: Challenges, distance education, teachers' training

Introduction

In most developing countries, including Ghana, teacher education is saddled with a number of problems. These include dissatisfaction with the teaching profession, team turnover and retention, inadequate funding, quantity and quality of teachers. Others are quality in teacher production, selection of new entrants, teacher preparation programme, calibre of staffing, facilities in the institutions, administrative leadership and discipline, funding and pedagogy. The Global Campaign for Education (2006) report indicates that in sub-Saharan Africa, we need 4 million more teachers to achieve education for all. Across the region, half of

all primary school teachers are unqualified (Commission for Africa Report, 2005). Moon (2007) observed that qualification upgrading programmes, where they exist, usually provide a passport out of primary teaching. Professional development opportunities are also rare.

Various attempts have been made in the past to produce enough teachers and also to upgrade the qualification of teachers. Conventional approaches to teacher education via residential classroom face to face teaching in teacher training colleges have not met all the demands of the profession and this has led to an interest in open and distance learning alternatives. Perraton (2001) observed that conventional teacher training tends to be relatively expensive. Even where its center: is similar to that of secondary education, its unit cost is often several times greater.

In this direction, a number of restructuring of teacher education has taken place over the years but the problem of under qualified teachers and shortages of teachers are still not solved. These problems necessitated the need alternative ways of producing teachers. Consequently, between 1991 and 1994, the government of Ghana through the Ministry of Education (MOE) sponsored a number of studies to assess the distance education needs of Ghana (Kwamong, Awutn. Yerbuv. Owusu, & Aggor, 1994).

In general, distance education programmes have been developed with varied intentions. Some of them are: widening access to teaching qualifications; disseminating good practice: strengthening the education system as a whole by reaching not only teachers but the wider community in enabling school-based training and professional development and as a means of strengthening the links between theory and practice, and focusing on the school as a site for teachers' learning. Educators have also used distance education approaches to bring new thinking and teaching practice about specific subjects of the curriculum (Perraton, Robinson and Creed. 2001).

In China, Nigeria, and South Africa (OLSET) distance education for teachers is a significant part of the system and a part of national strategic planning for teacher supply and upgrading quality. In others, like Chile and United Kingdom or Brazil and India it has provided an alternative or supplement. Similarly, in countries like Mongolia and Burkina Faso, it has filled a gap that would otherwise have continued unfilled (UNESCO, 2001).

In Ghana, the Institute for Educational Development and Extension (IEDE) of the University of Education. Winneba, Centre for Continuing Education (CCE), and Institute of Education (IOE), both of Cape Coast University, are the agencies training teachers using distance education. Even though their efforts are quite recent they are confronted with a number of challenges. Both students and faculty are faced with some challenges. Similarly, organizational issues and course considerations

pose a lot of challenges to them. However, the degree of the challenges is not known. It is in the light of the above that this study seeks to establish the level of challenges that confront these agencies.

The theoretical framework for this study is Peter's (2003) cultural structuralist model which states that each phase of distance education has its own unique form of teaching and learning behaviour. This theory was chosen because it takes into consideration structural and critical cultural variables in distance learning. The researcher is of the view that cultural setting and structural design of any distance learning programme has a bearing on the sort of challenges that go with it.

Some studies have exposed various challenges that face the use of distance education in training teachers. On the needs of students, Tu and Twu (2002) argue that it is necessary to examine what students need to learn, how they would like to learn, and how their learning experiences can be enhanced. Helping students to plan their time wisely is another challenge. According to Alexander (2001), it is critical to students' achievement and needs to be embedded into the learning activities of courses. To buttress this point, Draves (2002) stated, "It is very important to set a time of day and days of week in which to study" (p. 178).

On faculty, Rockwell, Furgason and Marx (2000) identified institutional rewards, workload expectations, and incentives as crucial in getting faculty members to commit themselves to distance learning. Anderson and Middleton (2002) also reported that faculty members typically do not want to change their style of instruction.

The organisation and implementation of distance education programmes, also come with a lot of challenges. Rockwell, Furgason and Marx noted faculty time, competencies and incentives to develop and teach at distance as major challenges. Da Costa (2005) on his part identified infrastructural settings to afford modern technologies or print, a sound financial capacity to run a technology-based learning system that is meaningful and sustainable, and pressure to meet quality education as the three challenges facing institutions intending to introduce a bimodal approach to distance education.

Under course considerations, Williams (2003) observed that acceptance of distance education as an appropriate teaching method, stiff competition for limited financial resources, and the ability to withstand slow governance procedures as the major challenges. Another key component inherent in the challenge of distance education is not content but interaction itself (Board of Trustees, University of Illinois, 2003; Draves, 2002). Powerful learning and education take place through student-to- student interchange and student-to- instructor interchange.

Though much has been done on the challenges facing distance education delivery

globally, very little is known by way of an attempt to study the level of differences that these challenges exert on the various institutions.

Methodology

Research Design

Descriptive survey design was employed in this study without manipulating any variable.

Participants

The population for the study was all distance students pursuing diploma in Basic Education in the University of Cape Coast and University of Education, Winneba. They number 41,038 (CCE - 15,545, IEDE - 12,139 & IOE - 13,354). Purposive and simple random sampling techniques were used in selecting 11 study centres and 285 participants respectively. While 242 were students, the rest 43 were staff of the two universities. One hundred and seven of these respondents have been on the distance education programme for 2 years while 83 have done three years. The rest 52 were in their first year. One hundred and seven had direct admission because of their professional certificate "A" qualification, while 93 gained admission by writing an entrance examination. The rest, 42 were admitted through an interview.

Instrument and Data Sources

Questionnaire, designed by the researcher, was used to collect data. The instrument consisted of two sections. The first part asked questions on the profile of participants. This is made up of year level, institution enrolled with, mode of admission, and study centre. The second part focused on the challenges inherent in training teachers through distance education. The variables of interest are: challenges facing students (13 items), challenges facing faculty (7 items), organisational challenges (8 items), and challenges of course considerations (8 items). The items were structured on a five-point Likert scale comprising the following options: *strongly disagree*, *disagree*, *no opinion*, *agree*, and *strongly agree*. The higher the score, the higher the challenge to training teachers through distance education.

Procedure

The instruments were trial-tested on a sample of 20 randomly selected distance education students at Takoradi Study Centre. The trial testing enabled the researcher to have a trial run of items chosen and to establish construct validity and reliability of the items. As a result of the trial test, 3 items were reviewed for clarity before the main study. The inter-item reliability co-efficient using Cronbach's alpha of the questionnaire yielded a reliability $r = 0.87$. The coordinators of the eleven study centres selected for the survey administered the instruments on behalf of the

researchers. The respondents were informed about the purpose of the survey and assured of total anonymity.

Results

Hypothesis 1: Ho: There is no statistically significant difference among the three agencies responsible for educating and training teachers in terms of the challenges that students face.

Table 1 presents the data on participant' responses regarding the challenges that teacher trainees on the distance education programme face in Ghana.

The data in Table 1 show that the difference in challenges facing students among ire agencies that train teachers in Ghana in the use of working hours to study, $F(2,282) = 10.358, p < .000$; financial costs, $F(2, 282) = 4.427, p < .013$; and access to libraries, $F(2, 282) = 6.349, p < .022$ were statistically significant.

Table1: Challenges Facing Students

Item	Centre for Continuing Education (n = 89)		Institute of Edu. Dev. & Extension (n = 80)		Institute of Education (n = 116)		F	P value
	Mean	SD	Mean	SD	Mean	SD		
Use working hrs to study	1.76	.93	1.46	.76	2.05	.95	10.358	.000*
Financial costs	1.36	.71	1.15	.48	1.45	.80	4.427	.013*
Family life disruption	1.63	.88	1.54	.83	1.56	.85	.274	.760
Perception of D.E.	2.18	.88	2.21	.85	2.01	.86	1.708	.183
Commitment of tutors	2.15	.90	2.09	.89	1.92	.96	1.638	.196
Employers support	1.37	.73	1.43	.73	1.51	.83	.834	.435
Difficulty faculty level of	1.69	.89	1.70	.88	1.48	.81	2.084	.126
Lick of regular feedback	1.73	.91	1.83	.92	1.53	.85	2.746	.066
Late course completion	1.44	.77	1.20	.54	1.37	.74	2.591	.077
Access to libraries	1.34	.71	1.15	.45	1.52	.85	6.349	.022*
Alienation and isolation	1.81	.93	1.76	.86	1.77	.89	.074	.929
Unsuitable study mats.	1.44	.75	1.26	.61	1.21	.57	3.403	.092
Lack of training in tech.	1.28	.66	1.38	.74	1.28	.67	.520	.595
Total	21.16	4.79	20.15	4.28	20.66	4.94	.962	.383

$p < 0.05$ alpha level

To determine the location of the difference, a post hoc test using LSD multiple comparisons was carried out. The results showed that the direction of the difference in the use of working hours to study was on all three fronts; between Centre for Continuing Education, IEDE, UEW-Winneba and Institute of Education, UCC on one hand. Another direction of difference was noted between IEDE UEW- Winneba, Centre for Continuing Education, and Institute of Education, UCC on the other hand. On the third front, the location of difference was between Institute of Education, Centre for Continuing Education and IEDE, UEW-Winneba.

The same direction of difference was noted in the case of financial cost of studying faced by students. That is: IEDE UEW-Winneba, Centre for Continuing Education, and Institute of Education, UCC. The other directions of difference were between Centre for Continuing Education and IEDE, UEW-Winneba on one hand and Institute of Education and IEDE, UEW-Winneba on the other.

The direction of difference noted in the area of lack of access to libraries was between Centre for Continuing Education and Institute of Education on one hand and Institute of Education on the other hand. However, another direction of difference on both fronts was noted between Institute of Education, Centre for Continuing Education and IEDE, UEW-Winneba.

The null hypothesis that there is no statistically significant difference among the three agencies responsible for educating and training teachers in terms of the challenges that students face is therefore rejected.

Hypothesis 2; Ho: There is no statistically significant difference among the three agencies responsible for educating and training teachers in terms of the challenges that face faculty.

An analysis of the data in respect of challenges faculty faced is shown in Table 2.

Table 2: Challenges Facing Faculty

Item	Centre for Continuing Education (n = 16)		Institute of Edu. Dev. & Extension (n = 10)		Institute of Education (n = 17)		F	P value
	Mean	SD	Mean	SD	Mean	SD		
Training in course dev.	1.19	.40	1.20	.42	1.35	.49	.672	.512
Tech, training & teach.	1.25	.45	1.00	.00	1.24	.44	1.495	.237
Extra burden	1.38	.50	1.40	.52	1.06	.24	3.088	.057
Lack of support	1.31	.60	1.00	.00	1.12	.33	1.828	.174
Job security	1.56	.81	1.40	.52	1.06	.24	3.258	.049*
Inadequate staffing posit	1.63	.81	1.50	.53	1.12	.33	3.231	.050
Respect for DE	1.62	.81	1.20	.42	1.24	.44	2.273	.116
$p^{10} < 0.05$ alpha level	8.91	2.59	8.70	1.95	8.18	1.85	.450	.642

The data analysed in Table 2 indicate that the differences in the challenges that faculty face among the three agencies training teachers in distance in Ghana in the areas of training in course development and technology usage in teaching, distance education being extra burden, lack of support for faculty, inadequate staffing position, and respect for distance education as a means for training teachers were all not statistically significant. However, in the case of job security, a statistically significant difference, $F(2, 40) = 3.258$. $p < .049$ was recorded. A post hoc test revealed that the direction of difference was between Centre for Continuing

Education and Institute of Education both of the University of Cape Coast. The researcher, therefore, accepted the research hypothesis that there is a statistically significant difference among the three agencies responsible for educating and training teachers in terms of the challenges that face faculty.

Hypothesis 3: Ho: There is no statistically significant difference among the three agencies responsible for educating and training teachers in terms of organisational challenges.

The views expressed by respondents concerning organisational challenges are reflected in Table 3.

Table 3: Organisational Challenges

Item	Centre for Continuing Education (n = 16)		Institute of Edu. Dev. & Extension (n = 10)		Institute of Education (n = 17)		F	P value
	Mean	SD	Mean	SD	Mean	SD		
Funding	1.25	.58	1.00	.00	1.00	.00	2.512	.094
Commitment	1.44	.73	1.50	.53	1.00	.00	4.242	.021*
Cost of technology	1.25	.68	1.20	.42	1.06	.24	.669	.518
Competent comput. staff	1.19	.40	1.00	.00	1.00	.00	2.898	.067
Updating staff in techn.	1.13	.34	1.00	.00	1.00	.00	1.794	.179
Staff training costs	1.44	.63	1.00	.00	1.22	.33	3.672	.034*
Inadequate technology	1.25	.68	1.60	.97	1.29	.69	.731	.488
Cost of DE course mats.	1.13	.50	1.10	.32	1.18	.39	.119	.889
Total	9.18	1.60	9.40	1.57	8.65	1.32	.941	.400

$p < 0.05$ alpha level

The information in Table 3 shows that the difference in organisational challenges among of the three agencies in the level of commitment of institutional leaders to distance programmes, $F(2, 40) = 4.242$, $p < .021$ and ongoing staff training costs, $F(2, 40) = 3.672$, $p < .034$ were statistically significant. LSD post hoc test of multiple comparisons was used to determine the direction of the difference in the area of commitment of leaders. It was between Centre for Continuing Education and Institute of Education on one hand and IEDE-UEW, Winneba and Institute of Education on the other hand. However, another direction of difference on both fronts was noted between Institute of Education, Centre for Continuing Education and IEDE, UEW- Winneba. In the area of ongoing staff training costs, the direction of difference lies between Centre for Continuing Education, IEDE, UEW-Winneba and Institute of Education on all three fronts.

Hypothesis 4; Ho: There is no statistically significant difference among the three agencies responsible for educating and training teachers in terms of the challenges of course considerations.

Respondents' ideals on course consideration challenges are analyzed in Table 4.

Table 4: Challenges of Course Considerations

Item	Centre for Continuing Education (n = 89)		Institute of Edu. Dev. & Extension (n = 80)		Institute of Education (n = 116)		F	P value
	Mean	SD	Mean	SD	Mean	SD		
Quality of materials	1.75	1.00	2.20	1.03	1.18	.53	4.799	.014*
Curriculum dev. for DE	2.00	1.03	1.40	.84	1.12	.49	5.029	.011*
Maintaining same content	1.81	.98	2.20	1.03	1.24	.56	4.362	.019*
Maintaining same learning obj.	1.88	.96	2.20	1.03	1.24	.44	5.044	.011*
Maintaining same standards	1.75	.93	2.00	1.05	1.29	.69	2.304	.113
Maintaining same credit.	1.56	.89	1.60	.97	1.41	.80	.190	.828
Assessing student performance	1.50	.89	1.60	.97	1.24	.56	.791	.461
Course pacing in DE	1.69	.95	1.60	.97	1.12	.49	2.345	.109
Total	15.09	6.83	14.80	6.61	9.82	3.11	4.269	.022*

p < 0.05 alpha level

The analysis shown in Table 4 points to the fact that statistically significant differences exist among respondents of the three agencies in their rating of quality of materials $F(2, 282) = 4.799$, $p < .014$ and curriculum development for distance education, $F(2, 282) = 5.029$, $p < .011$ respectively. In the same vein, statistically significant differences were noted among respondents in maintaining the same content as the conventional programmes, $F(2, 282) = 4.362$, $p < .019$ and maintaining same learning objectives, $F(2, 282) = 5.044$, $p < .011$ respectively. Furthermore, on the whole, the challenges of course considerations were statistically significant, $F(2, 282) = 4.269$, $p < .022$. An LSD post hoc test revealed that the direction of difference in the quality of materials lies between IEDE, UEW-Winneba and Institute of Education whilst in the area of curriculum development for distance education is between Centre for Continuing Education and Institute of Education. In the area of maintaining the same content as the conventional programmes, the direction of difference is between IEDE, UEW-Winneba and Institute of Education. In the case of maintaining the same content as the conventional programmes, the difference is between Institute of Education and Centre for Continuing Education on one hand and Institute of Education and IEDE, UEW-Winneba on the other hand. On the whole, the direction of difference in the challenges of course considerations lies between Centre for Continuing Education and Institute of Education.

Discussion

The number of distance learning programmes offered by African universities has increased recently. To run a successful distance learning programme depends on a wide range of factors; some of which pose a lot of challenges to students and faculty. Issues concerning management and course design equally attract some challenges. It is, therefore, very important to identify the challenges that go with the running of distance education, particularly for the training of teachers so that

appropriate measures are put in place to address them.

Teacher training institutions in Africa are challenged to provide adequate training to distance learners. The results of this study reveal that all distance students in the two universities encountered almost the same level of problems in the areas of perception of distance education, commitment of course tutors, difficulty level of courses, and unsuitable study materials. However, statistically significant differences exist among the three agencies in the two universities in terms of using working hours to study, financial cost of the programme, and having access to libraries.

Teachers in the distance learning programme spend much of their time teaching. Hence, they are not able to find time for their studies. As a result, they use the official instructional hours to study their course materials. Clearly, this is a pointer to lack of time management. This finding, therefore, gives credence to Draves' (2002) study which projects the importance of time management for distance students. The fact that significant difference was recorded among the respondents gives an indication that it has a serious effect on teaching and learning in the schools. In some cases, it is just because the students have not been able to develop good study habits. There is, therefore, the need for distance students to be trained to be independent and utilise critical thinking skills that will benefit them at their workplace and in their lifelong learning experiences.

Running distance education goes with a lot of cost which is eventually passed on to students. Even though African governments have now seen the vital role that distance education can play in developing the human resource base of their countries, especially in the training of teachers, they are not able to commit enough funds into the running of distance education. Elsewhere in Taiwan, Tu and Twu (2002) observed that there were insufficient funds dedicated to distance education. Each year, the government assigns US\$3,125 to S9,375 for a traditional university student while the expenditure for a distance student is US\$625. The story is the same in Ghana. The governments' financial support of d 300 to only final year students teaching in public schools is woefully inadequate and very discriminatory. This differential in financial support limits some distance students from benefiting from distance learning.

Though distance students consistently rate communication and support from faculty and other students as having the major influence on their learning, they have never forgotten the unique position of libraries in their studies. Libraries serve as a very vital resource for distance students. Where they are not able to have access to libraries, it affects their studies greatly. The majority of students in the Diploma in Basic Education programme are in the rural communities where libraries do not exist. Even in some urban and semi-urban towns where we have libraries, they are under resourced. The lack of access to libraries would, therefore,

impact negatively on students' performance.

The results of this study also reveal that statistically significant differences exist among faculties in terms of job security in the two universities training teachers through distance education. Faculties involved in distance learning programmes, even though they are employees of their institutions, take up the job with the agency running distance education on part time basis in order to earn extra income. This complements Ivanov et al (2006) position that some academic traditionalists embrace distance learning not only because it may provide a source of much needed revenue, but also because it allows for the low-cost delivery of information to a non-traditional pool of students.

It is important to point out that judging from the challenges that go with training teachers through distance education; faculty needs to reappraise their role in the effective running of the programme. In a study, McPhee and Niihr (2000) accept that with the delivery of distance learning in today's society, the changing roles of both the teacher and the learner need to be seriously considered. As a facilitator or a moderator within a distance learning scenario, there is every indication that they do not occupy a predefined position of power; it is possible that instead of being a teacher, they have to become moderators to control the flow of the discourse (Mitra and Hall, 2002). They need to know that students do not learn much just sitting in classes listening to teachers, memorising prepackaged assignments, and spewing out answers. They must talk about what they are learning, write reflectively about it, relate it to past experiences, and apply it to their daily lives. This can only happen if faculty realise their new' role and play it very well.

What is crucial is training faculty toward their new role, which indeed, represents one of several challenges associated with distance education. Other challenges such as training in course development, inadequate staffing position, and respect for distance education also exist among faculty in the institutions except that the differences were not statistically significant.

The role of faculty in training teachers using distance education is very unique because of the professional touch that must go with their work. They need to expose students to pedagogical skills and supervise practical teaching both at the study centres and in the schools at which the students are stationed. This makes the work of faculty running the Diploma in Basic Education more challenging. Indeed, global changes are calling for the development of new pedagogies with new communication technologies in ways which are sensitive to issues of cultural diversity.

The findings also reveal funding, cost of technology, and course materials, inadequate technology, competent staff and technological requirements as some organisational challenges that are facing the institutions at almost the

same level. Aside, commitment of staff and training costs of staff in the three agencies, statistically vary significantly. The success of every distance education programme depends, to a very large extent, on the commitment of staff to the job. To be committed to the job means issues bothering on reward and incentives for staff must be given priority. This finding complement Da Costa's (2005) assertion that institutional rewards, workload expectations, and incentives are all crucial in getting staff commit themselves to distance learning. Such rewards resulted in greater degree of observable commitment by staff.

Generally, running distance education goes with huge cost. Some of these are production of course materials, distribution of courseware, equipment, tuition, and other overhead costs. Governments have proved willing to fund not only initial teacher education, but also some programmes of continuing professional development, especially for curriculum reform, or for some upgrading programmes to raise the minimum standard of teacher qualification. However, not much funds have been committed to the training of staff to make them more competent, effective and efficient. There is evidence that most members of the staff in the distance learning programme came from the traditional educational system and most have had little or no experience in distance education settings prior to joining distance learning programme. There is, therefore, the need to carry out more training of staff without counting the cost. The very survival of distance learning hinges on course considerations. This study has established that maintaining same number of credits and standards pose challenges in almost equal dimensions to the institutions studied. Similarly, pacing of courses and assessing students' performance are also another set of challenges they faced. On the contrary, developing curriculum for distance education and the quality of study materials differ significantly among the three agencies training teachers by distance mode. Statistically significant differences were also recorded in their attempt to maintain the same content and learning objective since they are all running Diploma in Basic Education.

This finding is quite revealing because the differences in content and quality of course materials could give course for standards to be compromised. Such a situation may lead to the production of half-baked teachers who cannot live up to expectations. The development of course materials is an activity that involves careful planning, co-ordination, team work, and capacity and expertise in the field of distance education on the part of the course co-ordinators as well as faculty members. There is, therefore, the need to inject some creativity, zest and imagination into the development of curriculum for distance education.

Conclusion

This study is conclusive on the fact that indeed many challenges are confronting students and faculty who are involved in the distance education programme for training teachers. Specifically, the challenges which students faced were with the use of instructional time for studies, financial cost of the programme, and access to libraries. On the other hand, faculty had the problem of job security. Lack of commitment and cost of training staff were other challenges. On course considerations, curriculum development and quality of study materials were also areas of concern. The findings of this study, therefore, agree with the theoretical framework for the study which stipulates that cultural setting and structural design of any distance learning programme have a bearing on the sort of challenges that go with it.

Recommendations

Based on the findings and conclusions drawn in this study, it is recommended that teachers in the distance education programme should be taught effective study habits and time management. This will help them in planning their studies well and avoiding using instructional hours for their private studies.

Government needs to be more proactive in honouring the promise of financial support for all teachers in the distance education programme. There is every indication that it is cost effective and a sure answer to the problem of granting study leave with pay to a large number of teachers annually.

We also need to step up students support services especially by solving the problem of lack of access to libraries. Getting all the study centres hooked to the internet will ensure that students get access to the information super highway.

The faculty needs to be given the right training in almost all aspects of distance education. They also need orientation and motivation that are crucial in the successful running of distance education programmes for them to feel secured in the job. The designers of distance learning for teachers need to take a closer look at their curriculum responsibilities. There is the need to put in place new structures and new forms of curriculum so that the areas of difference noted in this study are addressed in order to avoid lowering of standards.

Finally, the management of the three agencies training teachers by distance mode need to meet periodically to share ideas on how to ensure quality and parity in their work.

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