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Analyzing the methods and approaches for transacting diploma in basic education curriculum in Ghana

Kofi Nkonkonya Mpuangnan [a] *, Vida Adzo Amegbanu[b], Soubhagya Padhan [c]

[a] *Department of Education, MS University of Baroda, Vadodara 390002, India*
[b] *Department of Technical/Education, Mampong Technical College of Education, Mampong, Ghana*
[b] *Department of Education, MS University of Baroda, Vadodara 390002, India*

Abstract

Based on the dynamic nature of the Ghanaian society, teacher training has become a major concern for all. Successive governments have formulated policies to improve quality education at this level. One of such policies is the Education Act of 2008 that made provision for a Diploma in Basic Education (DBE) curriculum in the Colleges of Education (CoE). The study aimed to examine how this curriculum was transacted with emphasis on methods and approaches adopted by the tutors. So, a descriptive survey design was adopted for the study and drawn needed data from the College author principals, tutors, student-teachers and Regional Directors of Education by using tools such as questionnaires, and group discussion. The collected data from the experts were analyzed by using Mean and SD while data from the student-teachers were presented qualitatively. It was found that tutors use a variety of teaching methods to teach the various categories of courses viz., Educational and Professional Studies, Core courses and Elective courses. But a few of such teaching methods like Lecture and Brainstorming were inappropriate for teaching courses such as Physical Education, ICT and Mathematics. It was also found that teacher trainees were exposed to first-hand teaching experience through practice teaching in two phases. Thus on-campus practice teacher and out-campus practice teaching.

Keywords: Diploma in Basic Education; Curriculum; Methods; Approaches and Transaction

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* Kofi Nkonkonya Mpuangnan. Phone.: +917575898628
E-mail address: nkonkonya@gmail.com

1. Introduction

Teacher training has a long history in Ghana dating back to the colonial era. It evolved gradually from the European Mission Training College where Catechists were trained for evangelism (Graham, 1971). The expansion of teacher education continued extensively after independence in 1957 due to new educational policies and various committees. In 2002, Anamuah-Mensah committee advocated for an upgrade of Teacher Training Colleges to diploma-awarding institutions to train basic school teachers as per the socio-economic needs of the Ghanaian people (Adentwi & Baafi-Frimpong, 2010). This Committee's report led to the formulation of Education Act 2008 (Act 778) which introduced Diploma in Basic Education (DBE) at the Colleges of Education (CoE) affiliated with the Institute of Education, the University of Cape Coast (UCC). The main objective of the DBE curriculum is to prepare generalist teachers in content knowledge and skills to teach all the basic school subjects (Adentwi & Baafi-Frimpong, 2010). For this reason, the prospective teachers are required to demonstrate appropriate pedagogical strategies in making optimum progress in teaching and learning. However, many studies have argued that the basic school teachers are incompetent as most of them cannot apply appropriate teaching methods in the classroom to achieve instructional objectives (Akyeampong, 2017; Mirici, 2015; Ngman-Wara, 2015, Kuyini & Abosi, 2011). The question that arises here is that what is the appropriateness of the methods and approaches for transacting the DBE curriculum? To find answers to this question, it is essential to analyse the methods and approaches for transacting this curriculum in the CoE. Perhaps appropriate suggestions could be sought to improve the curriculum transaction.

1.1 Mode of transacting DBE curriculum

The mode of transacting the DBE curriculum takes the in-in-out approach. This means teacher trainees spend first two years in their various colleges studying pure academic courses including on-campus teaching practice (second year) and in the third year, they embark on out-programme teaching practice in schools (Adentwi & Baafi-Frimpong, 2010). The DBE courses are in three categories viz, Education and Professional Studies, Core, and Elective courses. To transact these courses, instructional strategies are critical for creating a conducive environment (Hopkins et al, 2000). However, a study conducted by (Patti, 2013) in the United States of America revealed that a few teachers adopt a variety of teaching methods in creating democratic classrooms for effective teaching and learning. In Ghana, a study reveals that the methods of initial teacher preparation program are not balanced as practicality is not given equal weightage. This suggests that appropriate teaching methods are not used in teaching the DBE courses. Huedenu and Adibi Maria-Goretti, (2015) found that lecture, discussion, question and answer methods are mostly used by teachers for teaching Art

related courses. Also, Butcher (1970) and Kiweewa et al (2018) revealed that regular workshops, projects, and performances are crucial for teaching Guidance and Counseling and Music and Dance in foreign countries. Therefore, it is essential to find out the appropriate teaching methods that can be used to achieve instructional objectives in the three categories of courses taught in the CoE in Ghana.

Focusing on the core courses, UNICEF (2017) opines that school teachers in Ghana need excessive pedagogical training, particularly in the core subjects to align with the changing needs of the basic school students. Some studies conducted in foreign countries revealed that most of the tutors at the teacher training colleges adopt lecture method in teaching Science and Mathematics (Enu et al, 2015; Akarawang et al, 2015; Mungure, 2017). It was further reported that many basic school teachers failed to demonstrate pedagogical skills to contextualize scientific process to the students (Ngman-Wara, 2015). However, no study was found in Ghana about teaching methods used for teaching the core courses. Therefore, in this study, the appropriateness of the teaching methods that are most frequently used for teaching the core courses are also investigated.

According to Abudu and Donkor (2014), most of the tutors and teacher trainees are not committed to taking part in the supervision of on-campus teaching practice. Also, Mohamed, et al (2015) opined that the cooperate schools, where out-programme teaching practice is taking place, require that qualified mentors to guide student-teachers to be effective. This suggests that the mentors are having mentorship lapses that must be relooked. Based on this, a question that baffles the minds of the researchers is how practice teaching is being organized in the various colleges in Ghana to produce competent prospective teachers? To find answers to this question, it is essential to conduct this study.

1.2 Research questions

Based on the review of related literature presented above, the following questions have emerged;

i. How appropriate are the methods and approaches for preparing student-teachers?
ii. What are challenges militating against the implementation of the DBE curriculum?
iii. What are the appropriate strategies for preparing effective prospective teacher?

1.3 Objectives of the study

The study was conducted as per the following objectives;

i. To study the methods and approaches used by tutors at the CoE for transacting the DBE curriculum.
ii. To suggest appropriate strategies for preparing prospective teachers

2. Method

To achieve the objectives of the present study, the descriptive survey method was used. It was useful to gather data from the appropriate population for generalization. The population of the study consists of all the 43 CoE affiliated with the Institute of Education, the University of Cape Coast, Ghana.

2.1 Data needed for the study

About objective-1, i.e., to study the methods and approaches used by tutors at the CoE, data needed were about judgments of the experts (Regional Directors of Education, and CoE principals, tutors) and final year teacher trainees. It is because they are the people directly involved in curriculum transacting. About objective-2, i.e., to suggest appropriate strategies for preparing prospective teachers, data needed are group discussions about the methods and approaches used by the tutors of CoE in teaching. The researcher felt that student-teachers would be able to reveal the problems as they directly feel the resultant effects. Include in these subsections the information essential to comprehend and replicate the study. Insufficient detail leaves the reader with questions; too much detail burdens the reader with irrelevant information. Consider using appendices and/or a supplemental website for more detailed information.

2.2 Sample and sampling procedure

There are ten regions in Ghana and to select a sample that represents the whole of Ghana, cluster random sampling was used to select one college from each region. In each of the selected regions, the Regional Director of Education (a total of 10) was selected while the college principals (a total of 10) was selected in every selected CoE by using a purposive sampling technique. This is because they are involved in the framing of the curriculum and would be in the best position to provide the needed data. Also, the same procedure was adopted in the selection of Head of Department (120) who are tutors from each college. To select final year student-teachers for group discussion, the ten regions were further clustered into four zones viz., Northern, Western, Eastern and Central. In each of the zones, a quota sampling technique was used to select 40 student-teachers (total 160) for group discussion. Therefore, the total number of participants were 200 (160+120+10+10). The details of the sample are presented in table 1 below.

Table 1: Sample selected for the study

S/N	Cluster as in Regions	Number of CoE	Selected CoE	Regional Director of Education	CoE Principal	Head of Department
1	Upper West	2	1	1	1	12
2	Upper East	2	1	1	1	12
3	Northern	4	1	1	1	12
4	Brong Ahafo	5	1	1	1	12
5	Ashanti	7	1	1	1	12
6	Eastern	6	1	1	1	12
7	Western	4	1	1	1	12
8	Central	4	1	1	1	12
9	Volta	7	1	1	1	12
10	Greater Accra	2	1	1	1	12
Total		**43**	**10**	**10**	**10**	**120**

Number of CoE are public colleges that operated up to 2017

2.3 Tools for data collection

Questionnaires consisting of open-ended and close-ended questions were prepared by the researcher to collect data from Regional Directors of Education, principals of the selected colleges and the Head of Department about pedagogical practices in terms of methods and approaches used by tutors for teaching the courses. The questionnaires for the CoE principals and the Regional Directors of Education were the same while the questionnaires for the Head of Directors were in subject-wise. Also, four sessions of group discussion were conducted for final year student-teachers on out-program. Here, the researcher collected data about tutors' knowledge and pedagogy, problems affecting transaction in CoE and suggestions for modification. The discussions were tape-recorded and transcribed.

2.4 Data collection procedure and analysis

The researcher sought permission from the principals of the CoE to administer the instruments. The researcher met the principals in their offices during their free time for permission to meet the tutors and the student-teachers. So, they were all met in their free time during data collection. All the respondents were assured of their confidentiality as the researcher promised to use the data for research purposes only. About data analysis, the data collected through the closed-ended questionnaires were subject to descriptive statistical analysis by using mean and standard deviation while collecting data from the group discussions were qualitatively presented.

3. Results

The findings of the present study are presented in four sections. Section-A is about the Methods of Teaching Educational and Professional Studies Courses, Section-B is about the Methods of Teaching Core Courses, section-C is about the Methods of Teaching Elective Courses, and section-D is Approaches to Practice Teaching.

Section-A

3.1 Methods of teaching educational and professional studies courses

The Educational and Professional Studies Courses are designed to cater for the students' professional needs. Therefore, this section presents the methods and approaches that tutors adopt for teaching each of these courses in CoE. The teaching methods were judged by the curriculum experts (N=30) and the details of the findings are presented in table 2.

Table 2: Mean & Standard Deviation of teaching methods used for teaching education and professional studies courses

Teaching Methods	Foundation Courses (n=30)													
	Research Methods in Education		Introduction to Guidance and Counselling		Assessment in Basic Schools		Education and School Management in Ghana		Principles and Method of Teaching in Basic School		Educating Individual with Special Needs		Principles and Practice of Education	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Brainstorming	1.767	2.0626	1.000	1.018	.8667	.34575	.7667	.43018	.8333	.37905	.9333	1.01483	.7000	.46609
Discussion	.4667	.8604	.9667	.1826	.7667	.43018	.8667	.34575	4.0000	.00000	1.4000	.93218	1.0000	1.01710
Demonstration	.5333	1.383	.9000	.30513	.6000	1.22051	2.500	2.54274	4.0000	.00000	.9333	1.01483	1.5000	2.33046
Debate	3.500	2.3305	1.8333	2.4507	3.167	2.45066	1.667	2.39732	.6667	1.72873	2.3333	2.53708	.6667	1.72873
Collaboration	.2667	1.01483	.9333	1.7208	2.333	2.53708	1.333	1.91785	2.2500	1.38873	.8000	1.34933	1.8000	.18404
Lecture	.8667	.3458	.9000	.30513	.8000	.40684	.9000	.30513	.8333	.37905	.8000	.40684	.8000	1.00801
Monitoring	.8333	.37905	.6667	1.5162	1.333	1.91785	1.500	2.33046	2.1667	2.52003	1.8333	2.45066	1.4667	1.96053
Project	1.000	.00000	.8000	1.6274	1.333	1.91785	1.500	2.33046	1.1667	2.15092	.5333	1.38298	1.1667	1.01483
Role play	2.167	2.52003	.9333	1.7207	1.167	2.15092	1.000	2.03419	1.3333	2.24888	1.6667	2.39732	3.0000	2.49136

The Standard Deviation (SD) of teaching methods used for teaching Foundation Courses given in table 2 is low indicating that Project, Discussion, and Demonstration teaching methods were most frequently used for teaching Research Methods in Education. Other teaching methods such as Lecture, Collaboration and Monitoring were used with low SD. This suggests that the variety of teaching methods are used to equip prospective teachers with knowledge and skills of Research Methods in Education. Regarding Introduction to Guidance and Counselling, it can be seen from table 2 that Discussion, Demonstration, and Lecture teaching methods are most frequently used. As Collaboration and Role Play are also frequently adopted by tutors for teaching this course, it can be said that Introduction to Guidance and Counselling is taught by using appropriate teaching methods in the colleges. It can also be noted that the Assessment in Basic Schools is most frequently taught by using Lecture, Brainstorming, and Discussion. As Project, Collaboration, and Role Play were rarely used, it can be said that practicality is not being encouraged. Therefore, prospective teachers require appropriate teaching methods to be practically involved in the assessment of school children in the classroom. For teaching Education and School Management in Ghana, it can be seen from table 2 that tutors most frequently used Lecture, Discussion and Brainstorm teaching methods. Since Collaboration, Monitoring, and Role Play were rarely used, it can be deduced that the prospective teachers might be lacking skills to undertake management tasks and leadership functions in schools. This must be relooked if effective teachers are to be produced. In the case of Principles and Method of Teaching in Basic School, it can be seen from table 2 that teaching methods such as Discussion, Demonstration, lecture, and Brainstorming were most frequently used with low SD. By these varieties of teaching methods, it can be said that prospective teachers would be engaged in an active learning process to develop their confidence, knowledge and pedagogy to be effective. For Educating Individual with Special Needs, it can be noted that Lecture and Discussion method were most frequently used for teaching prospective teachers. It can also be noted that methods such as Brainstorming, Collaboration, Project and Demonstration were sometimes used but as Role Play, and Monitoring were rarely used, it can be said that teacher trainees would find it difficult to develop their thinking, problem-solving and creative skills. These skills are critical for teaching in an inclusive classroom and must be considered. In case of Principles and Practice of Education, it can be learnt from the table 2 that the most frequently used teaching methods include Collaboration, and Brainstorming while the frequently used teaching methods include Discussion, Lecture, Monitoring, and Project. Therefore, it can be said that this course was taught by using appropriate teaching methods for developing teaching potentials of prospective teachers. Although the teaching methods used for teaching some of the Educational and Professional Studies courses like Assessment in Basic Schools and Educating Individual with Special Needs require modifications, it can be said here that the SD of almost all the courses is low. This suggests that the values were close to the Mean given an implication

that the teaching methods were appropriate for preparing teachers with professional astute.

Section-B

3.2 Methods of teaching core courses

Noting that the core courses are being taught at the basic schools, it is expected that student-teachers who are studying this curriculum would be equipped with content knowledge to teach. Therefore, this section presents the methods and approaches for teaching the core courses. The judgments of the experts (N=30) about the teaching methods used for teaching these courses are presented in table 3.

Table 3: Mean & Standard Deviation of teaching methods used for teaching core courses

Teaching Methods	Core Courses (n=30)											
	English language		Mathematics		Integrated Science		Environmental & Social Studies		ICT		HIV/AIDS Education	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Brainstorming	1.9000	1.06188	3.2333	1.35655	2.8000	1.64841	1.1333	.34575	3.0333	1.44993	1.1333	.34575
Discussion	1.9333	1.20153	3.1333	1.54771	1.6333	1.03335	1.1667	.37905	2.9333	1.43679	1.2000	.40684
Demonstration	1.1667	.46113	1.1667	.37905	1.6667	1.21296	1.9333	1.04826	1.3333	.95893	3.2000	1.27035
Debate	1.4333	.89763	1.2333	.50401	2.3667	1.35146	1.9333	1.22990	2.2000	1.39951	2.6000	1.42877
Collaboration	2.1333	1.40770	1.9333	1.41259	2.4333	1.61210	1.3333	.71116	1.767	2.0626	1.7333	.78492
Lecture	1.8333	1.26173	1.7333	1.33735	1.6667	.92227	1.0667	.25371	1.9333	1.20153	1.2667	.58329
Monitoring	2.3000	1.48904	2.1000	1.49366	2.0000	1.36458	2.4333	1.30472	1.7667	1.10433	1.6333	.99943
Project	2.6333	1.54213	2.6667	1.47001	1.8000	1.18613	2.3000	1.34293	2.3000	1.48904	2.2333	1.25075
Role play	2.9000	1.39827	3.4000	1.32873	2.1000	1.32222	1.3000	.70221	3.3000	1.31700	2.3333	1.34762
Grammar translation	1.2000	.40684	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Games	1.2000	.40684	2.4667	1.59164	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Story-telling	1.1000	.30513	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A=Not Applicable

For the teaching of the English Language, it can be seen from table 3 that teaching methods such as Story-telling, Games, Grammar translation, and Debate were most frequently used with low SD. While other teaching methods like Brainstorming,

Discussion, Lecture, and Roleplay were also frequently used, it can be said that tutors have adopted appropriate teaching methods which are in the purview of the teacher trainees for developing their inquiry and critical thinking skills. Also, it can be seen that Mathematics was most frequently taught by using demonstration and debate. As Brainstorming, Discussion, Collaboration, Monitoring, Role Play and Project were also frequently used, it suggests that appropriate teaching methods were adopted to equip teacher trainees with knowledge and pedagogy to be effective in the Mathematics classroom. In case of Integrated Science, it can be seen from table 3 that Lecture method (SD=.92227) was most frequently used while other teaching methods viz., Brainstorming, Discussion, Demonstration, Debate, Collaboration, Monitoring, Project and Roleplay were frequently used. As the SD of each of these teaching methods is low and being close to the mean, it suggests that it is appropriate for preparing prospective competent teachers. It can further be noted that teaching methods that were most frequently used for teaching Environmental & Social Studies include Lecture, Brainstorming, Discussion and Collaboration with low SD. Also, other teaching methods that were frequently used include demonstration, Project and Role Play. Therefore, it can be said that these teaching methods are appropriate for promoting team-work, developing critical and analytical skills and positive attitudes amongst student-teachers to be competent. For the teaching of ICT, it can be seen from table 3 that the Demonstration method was used with low SD. As Lecture, Discussion and Brainstorming were frequently used while Project and Collaboration were rarely used by the tutors, it can be said that these teaching methods do not encourage the use of ICT tools like projectors, internet, computers, to promote teaching and learning. This must be relooked to produce competent teachers. It can also be seen from table 3 that HIV/AIDS Education was most frequently taught by using Brainstorming, Discussion, Collaboration, Lecture, and Monitoring with low SD. As Project and Roleplay were sometimes used while Grammar translation, Games and Story-telling were not applicable, it can be said that these teaching methods are appropriate for exposing student-teachers to life skills education whereby they would be able to apply skills and knowledge to educate people and show compassion to them in promoting harmonious and peaceful co-existence with people living with HIV/AIDS. Therefore, it can be concluded that most of the core courses are taught by using appropriate teaching methods which have low SD which and close to the Mean value of each of these courses.

Section-C

3.3 Methods of teaching elective courses

The elective courses are designed to prepare student-teachers in specific subject areas to be effective at the basic schools. Therefore, after completing the first year of the study, student-teachers are made to select one of the elective courses (see table 4) to study in

their subsequent years (second and third). Here, the methods adopted by tutors in teaching are presented in table 4.

Table 4: Mean & Standard Deviation of teaching methods used for teaching elective courses

Teaching Methods	Elective Courses (n=30)											
	Religious & Moral Education		Physical Education		Ghanaian Language & Culture		Music & Dance		Pre-Vocational Skills		Agriculture Science	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Brainstorming	1.4000	.93218	1.6667	2.39732	2.7333	1.14269	1.5667	.85836	1.8333	1.14721	2.2000	1.18613
Discussion	.7333	.44978	2.3000	1.29055	2.3667	.96431	1.5333	.62881	1.8000	.88668	2.0333	1.15917
Demonstration	2.1333	2.48767	.9667	.18257	1.5000	.68229	1.2667	.44978	1.3667	.66868	1.8333	1.26173
Debate	1.3333	1.91785	.6667	1.72873	1.8667	1.13664	2.5000	1.07479	1.6667	2.39732	3.4667	1.04166
Collaboration	2.1333	2.02967	1.8000	.61026	1.5667	.50401	1.8333	1.14721	1.7000	1.11880	2.1000	1.29588
Lecture	.7667	.43018	.4000	1.03724	1.3667	.55605	1.5667	1.00630	1.8667	1.30604	2.1000	1.37339
Monitoring	2.1667	2.52003	1.2000	1.86437	2.2000	1.27035	1.6333	1.09807	1.9333	1.22990	2.5333	1.45586
Project	1.1667	2.15092	1.3333	1.86437	2.3667	.96431	1.4000	.67466	1.6000	1.06997	2.4667	1.47936
Role play	1.4667	1.96053	.8000	2.24888	2.9667	1.21721	1.4000	.67466	2.7000	1.46570	3.5000	1.16708
Grammar translation	N/A	N/A	N/A	N/A	1.2667	.44978	N/A	N/A	N/A	N/A	N/A	N/A
Games	N/A	N/A	.9667	.18257	2.1000	1.18467	N/A	N/A	N/A	N/A	N/A	N/A
Story-telling	N/A	N/A	N/A	N/A	1.3667	.49013	N/A	N/A	N/A	N/A	N/A	N/A

It can be seen from table 4 that Religious and Moral Education was most frequently taught by using teaching methods such as Discussion, Lecture, and Brainstorming. These teaching methods have low SD indicating closeness to the Mean value of each method. As other teaching methods like Debate and Roleplay were frequently used while Demonstration and collaboration were used sometimes, it can be said that these teaching methods are appropriate in terms of developing analytical thinking skills and mastery of Mystagogical Pedagogy to be effective. Also, the most frequently used teaching methods for teaching Physical Education include Demonstration, Collaboration, and Games. Since Discussion, Debate, Monitoring, and Project were sometimes used and Grammar translation and Story-telling are not applicable, it can be said that these teaching

methods are appropriate, interactive in nature, and critical for involving student-teachers directly and indirectly in the teaching and learning process to be effective. In the case of teaching Ghanaian Language and Culture, Grammar translation, Story-telling, Demonstration, Discussion, and Lecture teaching methods were most frequently used with low SD. As other teaching methods like Brainstorming, Debate, and Roleplay were frequently used, it can be said that this course was taught by using a combination of classical, discovery and audio-lingual approach which is crucial for producing competent native language teachers. To teach Music and Dance, most frequently used methods are Demonstration, Discussion, Brainstorming, Project, and Roleplay. As the SD of these teaching methods are low and Lecture was sometimes used, it can be said that these methods are appropriate for preparing teacher trainees to imitate, explore, improvise, and compose music and dance thereby developing their musical literacy. For teaching Pre-Vocational Skills, teaching methods such as Demonstration, Discussion were most frequently used while some of the methods like Brainstorming, Collaboration, Lecture, Monitoring, Project and Roleplay were sometimes used. Since the SD of most of the teaching is low and close to the Mean, it indicates that the teaching methods were appropriate for promoting hand-on-learning which is crucial for developing skills and confidence of the prospective teachers. It can also be seen from table 4 that Agriculture Science was frequently taught by using Brainstorming, Discussion, Demonstration, Debate, Collaboration, and Lecture, Monitoring, Project and Roleplay. The SD of these teaching methods is not widely dispersed from its given Mean value. This indicates that most of the teaching methods are appropriate in terms of developing knowledge and manipulating skills of the prospective teachers though Lecture, and Debate are not suitable for teaching a practical course like Agriculture Science because of promoting rote memorization.

Section-D

3.4 Approaches to practice teaching

To study about how the practice teaching is carried out in the CoE, group discussion was organized for final year teacher trainees in four groups as per the four geographical locations of CoE (northern, eastern, western & central). During the discussion, the researcher was not having a checklist but the discussion was focused on the following themes.

i. Mode of transacting on-campus teaching practice
ii. Mode of transacting out-programme teaching practice
iii. Strategies to improve practice teaching

3.5 On-Campus teaching practice

Under this theme, the collected data from the group discussion are presented in the qualitative form as follows.

i. Teacher trainees first observe teaching methodologies used by school teachers in school for achieving their specific objectives in the first year.
ii. The on-campus teaching practice is allotted three credit hours. It was found that these credits are appropriate for the course.
iii. As per the methodology of the on-campus teaching practice, the second-year teacher trainees are made to prepare at least two lessons (45 minutes each) of any subject of choice to teach their colleagues in the CoE under the supervision of their tutors.
iv. The roles of the tutors are to check the lesson plan before the lesson, observe the presentation, and provide feedback at the end of the lesson.
v. One tutor was made to supervise each teacher trainee. However, it can be said that one observation is not appropriate for deciding on teacher trainees' teaching competencies.
vi. Most of the teacher trainees are not enthused to participate in the on-campus teaching practice as it is not properly planned by the many institutions and must be relooked.

Here, it can be concluded that on-campus teaching practice is the initial teacher training process that provides an opportunity for teacher trainees to learn the art of teaching under controlled condition before real field experience. As the supervisors and the peers (student-teachers) would give feedback, reinforce the effective use of methods and draws attention to weak points for improvement, it means the teacher trainees have the opportunity to develop their skills regarding teaching methodology, class control, lesson presentation and classroom management to be effective.

3.6 Out-program teaching practice

The points that emerged from here are presented in the qualitative form as follows.

i. The out-programme teaching practice is assigned three credit hours which are found as appropriate for training teacher trainees.
ii. Teacher trainees in their final year are sent to cooperate schools to teach under mentors for sixteen weeks. The duration was found as inadequate due to other activities like the writing of project work and preparation for the final year examination.
iii. The mentors' roles include helping trainees to plan lessons, coaching them in choosing appropriate teaching methods and class management techniques.
iv. The trainees are obliged to teach a minimum of five lessons for rigorous supervision by external supervisors from the CoE.
v. The external supervisors are to check lesson-plan written by trainees before the commencement of the lesson, observe the presentation, and provide feedback at

the end of the lesson. The supervisors visit teacher trainees twice monthly to supervise their work.

vi. In every supervision, each teacher trainee is supervised by one supervisor. And by the end of the programme, a minimum of five supervisors might have supervised each teacher trainee which would be appropriate for decision making.

vii. Within this period, each trainee might have swapped classrooms to plan and teach lessons and gained experience in all the basic school subjects.

Based on the above points it can be concluded that out-program teaching practice is appropriate for providing first-hand teaching experience for teacher trainees in schools. They undertake professional training involving practical teaching, exposure to other school responsibilities to be competent teachers.

4. Discussion

Based on the finding of the present study, it can be said that the teaching methods used for teaching most of the Education and Professional Studies Courses (except Assessment in Basic Schools and Educating Individual with Special) are appropriate. The teaching methods viz, Brainstorming, Discussion, Demonstration, Debate, Collaboration, Lecture, Monitoring, Project and Roleplay are a blend of teacher-centred and learner-centred. The SD of almost all the teaching methods used in the various courses is low suggesting that the values are close to the Mean. As these courses are designed for developing student-teachers' professional needs, a variety of teaching methods are critical. Although the lecture method does not encourage participatory learning, it is essential for teaching matured learners together with other teaching methods such as demonstration, collaboration, discussion and project in achieving instructional objectives. This finding is supported by (Huedenu and Adibi Maria-Goretti, 2015) but contradicts the finding of (Patti, 2013).

Most of the teaching methods used for teaching the core courses were appropriate. This is because Mathematics, Integrated Science, Environmental and Social Studies, ICT and HIV/AIDS Education were mostly taught by using demonstration, debate, Brainstorming, Discussion, Role Play and Project with low SD while Grammar translation, Games, and Story-telling were mostly used for teaching the English language. These methods serve as an audio-lingual and simulation approach for enriching the language and vocabulary skills of the teacher trainees. Such findings were also found by Enu et al, (2015), and Mungure, (2017). However, the findings here contradict the finding of Patti, (2013) who states that teacher trainees lacked access to a variety of methods and pedagogy to create democratic classrooms for effective teaching and learning. Since Patti conducted the study in a foreign country, the finding cannot be

generalized. Therefore, it can be said that teacher trainees in Ghana are exposed to a variety of teaching methods that are appropriate for achieving instructional objectives.

To teach the elective courses, it was found that many teaching methods were used. For instance, Brainstorming, Discussion, Demonstration, Collaboration, Lecture, Monitoring, Project, Roleplay were most frequently used for teaching Religious & Moral Education, Physical Education, Music & Dance, Pre-Vocational Skills and Agriculture Science while Grammar translation, Games, and Story-telling were prominent for teaching Ghanaian Language & Culture. As SD of most of the teaching methods was low, it can be said that they are appropriate for training prospective teachers. This is supported by (Huedenu and Adibi Maria-Goretti, 2015) and (Butcher, 1970). However, a study conducted in Ghana found that the teaching of some elective courses particularly Physical Education, Music & Dance, Pre-Vocational Skills is constrained by inadequate facilities (Sofo and Asola, 2016). The teaching of Physical Education, in particular, facilities are required to enhance frequent use of games and drill methods in the CoE. This will help students to attain excellence in learning new skills by participating in vigorous activities to be effective in schools (Srivastava, 2010).

It was further found that practice teaching in the CoE is in two phases. The first phase is on-campus teaching practice having three appropriate credit hours which allows teacher trainees to demonstrate model lessons under supervisors in gaining first-hand teaching experience. However, it was found that most of the CoE was not having adequate tutors while many others were not enthused to partake in this activity. So, one tutor was made to supervise one lesson at a time which was not appropriate for making a decision. This finding is supported by Abudu and Donkor (2014). The second phase is the out-campus teaching practice with three appropriate credit hours conducted in schools to expose teacher trainees to the entirety of the teaching fraternity for improvement of their teaching and management skills. It was found that tutors from the colleges visit twice for supervision and assessment of students' lessons and progress of work. Although most of the tutors are qualified supervisors, most of the school teachers were not committed mentors. Such finding was reported by Mohamed, et al (2015) and must be relooked to produce effective teachers.

4.1 Suggested strategies to improve practice teaching

During the interaction with the tutors and group discussion with the final year teacher trainees, certain strategies emerged for improvement of practice teaching. Such strategies are presented as follows.

- Mentors should be made to undertake in-service training on mentorship to prepare them adequately to be effective.

- In every two weeks, each of the teacher trainee on out-programme teaching practice should submit a progress report to the college containing daily activities particularly the number of lessons taught. This will help the management of the various colleges to know how their students are progressing under mentors in schools.
- The on-campus teaching practice should be given ample time (two semesters) for second-year teacher trainees to be able to prepare lessons on all the school subjects and teach their peers to gain confidence and experience before going to the field.
- Head of schools should expose teacher trainees on out-programme teaching practice to management tasks of a school head. This is critical for preparing them to accept responsibilities in schools where there are no qualified head-teachers.
- Head of schools must appraise the mentors regularly on their roles and responsibilities.
- For inadequate musical instruments and vocational facilities in colleges, tutors of Music and Dance and Vocational Skills courses may also arrange for practical lessons in nearby cultural troop/band and vocational institutions. This can be made possible through collaboration and team teaching methods.
- For final year teacher trainees to actively participate in co-curricular activities and extra-curricular activities in schools, it is essential that their involvement in such activities should be supervised and recorded as part of their assessment process.
- The final year teacher trainees on out-programme teaching practice should be assigned to one permanent mentor throughout the period (sixteen weeks). Since they swap classrooms after every two weeks, there will be a break in a bond established between a mentor and a teacher trainee making it difficult to adjust with the subsequent mentors within a short time frame.
- The principals of each of the CoE should arrange for permanent schools with qualified mentors to enhance out-programme teaching practice.

5. Conclusions

Based on the analysis and interpretation of the collected data of the present study, it can be concluded that a variety of teaching methods are employed by tutors in CoE for teaching the various categories of courses viz., Educational and Professional Studies, Core courses and Elective courses. But a few of such teaching methods like Lecture and Brainstorming were not appropriate for teaching courses such as Physical Education, ICT and Mathematics. This must be relooked to produce effective teachers. It was also found that teacher trainees have an opportunity to gain first-hand teaching experience

through practice teaching in two phases. Thus on-campus practice teacher and out-campus practice teaching. However, most of the colleges are not having proper collaboration with permanent schools with qualified mentors to work diligently with the teacher trainees on out-programme teaching practice. Therefore, it is recommended that management of the various CoE should liaise with schools, organizations and resource persons in the communities to cooperate with them in ensuring effective curriculum transaction in CoE.

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