

1. Introduction

In the recommendation of Anamuah-Mensah Committee Report, 2002, a new Basic Teacher Education (BTE) curriculum evolved leading to award of Diploma in Basic Education (DBE) in Ghanaian BTE colleges. The BTE colleges were affiliated to the University of Cape Coast (UCC), where its programmes were prescribed, and admission and assessment criteria were determined. The BTE curriculum was modified in 2014 to meet the needs of diverse Ghanaian society. However, the 2014 BTE curriculum has not been thoroughly reviewed since its implementation (Mereku, 2016; Owusu, Adu-Opare & Larbie, 2016).

In global context, the quality of teaching and learning in Ghanaian basic schools has been contemptuous (UNICEF, 2017). Proposals to relook into the BTE curriculum have become popular as it is not fulfilling the expectations of the society. Studies indicate that the contents of the curriculum and the approaches to curriculum transactions have fallen short of appropriate pedagogy and content knowledge which has subsequently generated debates whether to intervene in content knowledge of the curriculum, the pedagogy or the entire programme (Akyeampong, 2017; Amua-Sekyi, 2016; Owusu et al, 2016; & Akyeampong et al, 2012).

The Chief Examiners of various practical and language subjects urged teacher training institutions to redirect programmes to prepare school teachers with competencies in both subject knowledge and practical skills for schools; as Basic Education Certificate Examination (BECE) candidates in Ghana lacked adequate knowledge of practical activities and grammar rules (WAEC, 2017). The Ministry of Education (2016) also conducted National Education Assessment in Ghana and found that the pupils in class four and six were having low level of proficiency in Mathematics and the English language. The Ministry recommended modification of teacher preparation programmes in future to enhance the capacity of basic school teachers.

In international perspectives, many children leave primary schools; unable to read, write and perform simple arithmetic in Sub-Saharan Africa (UNESCO, 2017; UNICEF, 2016). According to the World Bank Group (2018), 40 percent of primary school teachers in Sub-Saharan countries were not having mastery of teaching concepts. It was further found that poorly trained and unmotivated teachers were likely to cause underperformance in schools while acknowledging the fact that what is taught in school depends to a great extent on teachers, and the quality of teachers depends on teacher education (World Bank Group, 2018;

UNICEF, 2016). The BTE curriculum therefore requires a thorough evaluation to ascertain how its objectives and contents are transacted in fulfilling the needs of the society and interest of Ghanaian children and their future (Amakyi and Ampah-Mensah, 2014).

2. Education in Ghana

Ghana, before independence was christened Gold Coast by the Europeans merchants because of abundant of gold found in the country (Lord, 2011). But when the country regained its independence in 1957, the name changed to Ghana in commemoration of the kings that ruled Ghanaian empire in the medieval era. During this era, the people depended on subsistence economy where farm produces were consumed by members of households (Hymer, 2018). Trade between one household and another was in a small scale and normally transacted through barter system (Hymer, 2018). Until the arrival of the European, the type of education then was informal (Akurang, 2002). The old generation transmitted values and skills to the young generation. The system of family among the Ghanaian people was highly extended. With that family system, members also contributed their quota by inculcating knowledge, and moral values into the young ones.

The arrival of the Europeans between 15th and 19th century introduced formal education in Ghana (Akurang, 2002). Since the introduction of education, the Ghanaian economic became a mixture of subsistence and formal economy. As such, formal education became a necessity for anyone who wished to seek employment in the formal sector. Therefore, children had opportunity to enroll in schools either public or private schools. Ghanaian children receive education in three phases. First phase is the basic education, second phase is secondary education and the third phase is tertiary education. Ghanaian education system had assumed a 6+3+3+4 structure. The primary school is 6 years; junior high school is 3 years, senior high school is 3 years while a bachelor degree in the University is 4 years respectively. Education remains compulsory for children between the ages of 6 and 14. It is also observed that the official language of instruction in Ghanaian education is English, except at the lower primary schools where the most common indigenous language in each region is used as a medium of instruction. Therefore, the literacy rate in Ghana increases as enrolments in schools increase. As such, UNESCO (2015) estimated literacy rate in Ghana at 76% whereas 90% of Ghanaian children were enrolled in schools in 2015.

Ghana has a centralized education system where the central government is responsible for funding public education at all levels (Adentwi & Baafi-Frimpong, 2010). The main sources

of funds are grants from the government, tuition fees, and donor partners such as World Bank, USAID and UNICEF (Adentwi & Baafi-Frimpong, 2010). It can be seen from the figure-1 that the Ministry of Education (MoE) assumes the top most position of all the management bodies that are in charge of managing Ghanaian education. The MoE is a government agency that formulates education policies and ensures functionalities of all levels as per the interest of the people (MoE, 2018). Other management bodies under the MoE are; the Ghana Education Service (GES), National Council for Tertiary Education (NCTE), and National Accreditation Board (NAB). The GES is an agency responsible for implementation of policies mainly at the pre-tertiary level (GES Act 508, 1995). Under the GES, there are other supporting management bodies such as; National Inspectorate Board (NIB) that is responsible for periodic nationwide inspection of teaching and learning in schools; West Africa Examination Council (WAEC) in charge of conducting final examinations generally for Junior and Senior High schools in the country.

The NCTE was inaugurated in 1993 as a semi-independent statutory body, as per the NCTE Act No. 454 of 1993 which advises the MoE on the development of tertiary education (NCTE Act 454, 1993). The NAB was also established under the MoE which is responsible for developing standards for accreditation and quality assurance for both public institutions and private institutions in the country (NCTE Act 454, 1993). To achieve educational goal, a corroboration has been established between the management bodies that are in charge of controlling and advising on the activities of education in Ghana. Whilst the schools supply students to the tertiary institutions (Universities and BTE colleges), the tertiary institutions intend to produce teachers as per the needs of the society. These management bodies are presented in the figure-1 below.

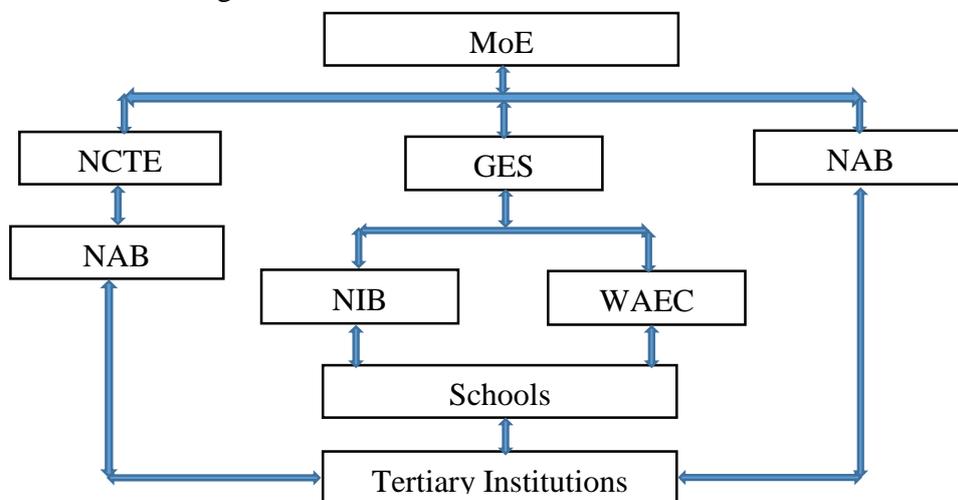


Figure-1: Management Bodies of Ghanaian Education

2.1. Teacher Education in Ghana

Europeans missionaries led by the Basel Mission introduced teacher education in Ghana (Asare-Danso, 2013). They established first teacher training college incorporated in seminary schools in 1848 at Akropong-Akuapem to train teachers and catechists for evangelism. Subsequently, the teacher education continued to expand under the British colonial authority in 1874 through their viable education policies (Graham, 1976).

The teacher preparation continued to gain grounds after Ghana had regained its independence in 1957. Successive governments have also tremendously contributed to expansion of teacher education in the country. For realizing the need of having quality and accessible education for all Ghanaian children, policies were formulated as per the needs of the society. Over the years, the education policies namely; Education Act, 1961 (Act 87), Education Reform, 1974, Education Reform, 1987, and Education Reform, 2007 played crucial roles in expansion of facilities and programmes in preparing basic schools students. Through these policies, teacher training institutions were empowered to prepare prospective teachers in integrated Bachelor of Education (B.Ed.) Master of Education and Doctorate of Philosophy in the various universities in the country. Also the universities, particularly the University Cape Coast (UCC), offer BTE curriculum leading to award of Diploma in Basic Education (DBE), which is meant for preparing teachers capable of teaching in basic schools.

The BTE colleges are affiliated to the UCC for programmes and academic co-corporation. The colleges admit qualified students from senior high schools based on merit. This is with an intention to ensure equity, equality and quality of teacher training in the country. Though the BTE curriculum has produced a sizeable number of basic school teachers in Ghana, there is still public uproar about the competencies of basic school teachers over the years. What is sceptical about the basic school teachers is what kind of knowledge they have acquired, how it was acquired and how it would be useful to the school children?

3. BTE Curriculum

Successful teacher preparation partly depends on quality curriculum. A 'curriculum usually contains statements of aims and of specific objectives indicating selection and organization of content which manifests certain patterns of learning and teaching in the perspective that the objectives demand them or because the content organization requires them' (Taba, 1962). The curriculum was operated with the following objectives:

- i. To produce generalist teachers capable of teaching all subjects at the Primary and J.H.S. levels.
- ii. To produce specialist teachers capable of teaching specific subjects such as Mathematics, Science and Technical at the JHS level, French at both Primary and JHS levels and Early Childhood Education.
- iii. To produce teachers who have a clear grasp of intended outcomes of their teaching activities, who are skilled in monitoring, diagnosing and appropriately providing equal opportunity to all the pupils.
- iv. To promote close working relationship between Colleges of Education and local schools through the “Out” component of the programme (UCC, 2014).

The contents of the BTE curriculum consist of contents and methods of teaching the core courses and foundation courses in a bid of equipping student-teachers with subject knowledge and pedagogy. The total credit hours of the courses are 66 which is spread across 6 semester. The semester-wise distribution of credit hours are; first semester (12), second semester (14), third semester (10), fourth semester (13), fifth semester (11) and sixth semester (6). To complete the curriculum successfully, it was required that the student-teachers would complete 66 credit hours and a minimum of 1.5 GPA. In order to meet the graduating requirement, the student-teachers would have to study and pass all the courses in the five semesters including practice teaching (UCC, 2014).

The BTE curriculum objectives are the torch bearers of the teacher training which in turn serve as foundation upon which the works of tutors and the student-teachers operate. Despite the directives of the BTE curriculum objectives, some commentators postulated that student-teachers after training cannot teach all the basic school subjects as some have no full grasp of practical skills (WAEC, 2017; World Bank Groups, 2018).

4. Curriculum Evaluation

Curriculum evaluation is a systematic process of determining the effectiveness of learning experiences of a group of learners in a particular grade (Eisner, 1985). It sets to judge the value and functionality of all the elements of a given curriculum or a course of study, and based on the outcome, a decision is made. Curriculum evaluation is important in educational management process. It is crucial for decision-making, improvement, professional development, accountability and certification (Shaw, Greene & Mark, 2006).

Approaches and Models of curriculum evaluation play crucial roles in curriculum evaluation. Here in this study, ‘humanistic approach’ and ‘programme evaluation model’ were adopted.

The Programme Evaluation is a process of gathering useful inputs and processes data in the context of quality, sustainability and effectiveness (Steele, 1991). As asserted by Bharvad (2010), other categories of programme evaluation model are 'Stake Congruence Contingency Model' propounded by Stake in 1967, and 'Stufflebeam's CIPP Model' by Daniel Stufflebeam in 1960. These models were used in this study though there is no relation between them.

The Stake Congruence Contingency Model describes the process whereby the evaluator finds potential outcome of a curriculum and compares with the actual outcome after it has been transacted (Stake, 1967). This model requires three sources of data namely; antecedents, transactions and outcomes (Stake, 1967). The antecedent's data are about the behaviours and characteristics of the learners prior to teaching and learning process. Transactions data are the interactions between teachers and students and other resources involved during execution of a curriculum. And during transactions process, feedbacks can be sought to improve future learning. Outcomes data are the feedbacks emanating from the curriculum. The feedbacks from the curriculum show satisfaction of teachers, parents, students and stakeholders. Stake (1967) envisages that judgment can be made on the basis of absolute standard, i.e., reflecting on personal judgment, and judgment on the basis of relative standards by reflecting on the characteristics of another programme.

Here in this study, the Stake Congruence Contingency Model was used to evaluate the BTE curriculum objectives. As there are four objectives in the curriculum, the evaluator reviewed all and made a prediction about its potentialities. And as per the judgements given by the experts and final year students teachers, the actual result about the curriculum objectives were revealed, and subsequently used to compare with the prediction i.e., statement of the curriculum objectives.

The CIPP Model focus on judging the context, input, process and product of a programme (Robinson, 2002). Here the context is propensity to define the objectives of the programme as per the needs of the society. Also, the inputs are the available resources and strategies that are deemed appropriate for facilitating the success of the programme. Process is plans and guidelines that guide the implementation of programme and further assist the implementers and the beneficiaries in judging the outcome. The product is a measure of actual outcomes. The outcomes, both intended and unintended, perhaps are significant for the policy makers. The policy makers and implementers would ultimately be prompted to focus on achieving educational goal. Looking at the CIPP model closely, it can be said that the findings derived

from a programme are useful for improvement. It may also be said that the CIPP model facilitated the evaluation of the BTE curriculum holistically. A broader picture was painted about all the essential components of the curriculum, evaluated it systematically by giving judgements about its effectiveness when implementation was going on. The models of curriculum evaluations are presented in figure-2 below.

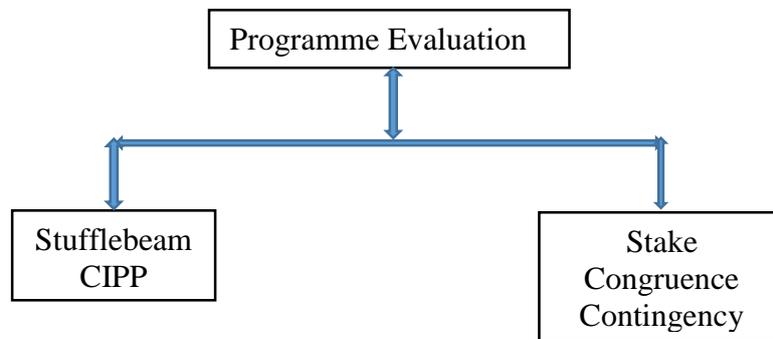


Figure-2: showing Programme evaluations models used in this study

Humanistic approach to evaluation focuses on collecting of qualitative data about a programme mainly during the implementation stage to determine process efficacy (Cronbach, 1982). The data are normally collected through interviews, observation and focus groups discussions. This approach is helpful in classroom situation as the evaluator can collect data about teaching and learning experiences for evaluation purpose (Bharrvad, 2010). Therefore, it was adopted in this study and was used to describe the collected data from curriculum experts and student-teachers about how the BTE curriculum objectives were relevant to the need of the society, how the curriculum contents were appropriate for preparing basic school teachers and how the curriculum was being transacted in colleges.

5. The Need for BTE Curriculum Evaluation

The BTE do not exist in isolation. Since many years the curriculum remained affiliated to the UCC and have been producing a variety of basic school teachers. In 2004, a new form of BTE curriculum was introduced by the affiliated university leading to award of Diploma in Basic Education (DBE). And the first batch of the DBE completed in 2007. In the 2014, the curriculum was revised by the UCC and has since been preparing teachers for basic schools. It was thought that a review of the curriculum was essential to ensure that competent teachers were prepared as per the needs of the society. However, some commentators have envisaged that most education reforms that have taken place over the years have not been systematically evaluated, and that the existing reforms at the various levels of education must be

systematically evaluated, and maybe a review could be effected to help the policymakers make right decision as per the needs of the society (Opoku-Agyeman, 2019; Adu-Opore and Larbie, 2016). Other research studies revealed that school teachers in Ghana and other Sub-Saharan African countries had inadequate content knowledge and pedagogy, and to produce competent teachers, regular review of teacher training curriculum is essential (World Bank Group, 2018; Owusu, and Mereku, 2016).

5.1. Justification of the Study

Before 2002, the quality basic school teachers in Ghana had experience a public outcry. Perhaps the public was worried about problems relating to teacher incompetency and felt that the BTE curriculum was not fulfilling the needs of the society. In the recommendation of Anamuah Mensah Committee, in 2002, a new form of BTE curriculum was introduced by the UCC leading to Diploma in Basic Education (DBE) in 2007. To ensure that certain discrepancies were dealt with appropriately in the curriculum, it was revised in 2014 and has since been used to produce teachers for basic schools.

However, many research studies have proposed that the BTE curriculum, 2014, should be reviewed. It was found that it was almost practically impossible for student-teachers after receiving the 3-year training in the curriculum to teach all the basic school subjects. It could also be noted that majority of the student-teachers who were teaching in the basic schools did not have clear grasp of the intended outcomes of practical teaching skills and other related skills such as monitoring, management and ability to handle inclusive classroom. Meanwhile, the government expenditure on BTE colleges has been doubling since 2007 in the name of quality basic teacher training but the value remain same.

Inadequate instructional material were also causing a nightmare for most of the BTE colleges. As instructional materials are relevant for preparing prospective teachers, availability of computers, smart classrooms, equipped libraries, laboratories and workshops were inadequate to facilitate innovative teaching in colleges. Certainly, such facilities were not provided adequately in most of the colleges. Since facilities were not adequately available; there was a growing concern of tutors relying on outmoded methods of teaching.

Another issue worth noting in the BTE curriculum was too much focus on knowledge-based subjects than practical-based subjects. Subjects such as Mathematics, English Language, Social Studies and the like were having more credit hours and treated in every semester throughout the duration of the curriculum. On the other hand, subjects such as Pre-Vocational

Skills, Music and Dance, ICT and Physical Education were having less credit hours and were taken as optional in some semesters. This is an indication of a shift of interest from practical and skill-based education spectrum to knowledge-based education. Maybe, it was for this reason that the candidates of the basic schools performed woefully in the practical subjects during examinations.

The age groups of the basic school children are critical stages of human development. Since most of them are under fourteen years, their rate of development is influenced by the education they acquire. Their mental, emotional, intelligence and social development partly depend on the psychological make-up of the class teacher. Consequently, little about this was known to the basic school teacher. This happens largely because Child Psychology was not given sufficient treatment in the BTE curriculum. It was either infused in Religious and Moral Education in most of the cases or treated as an aspect of another subject in only one semester for one credit hour. Since student-teachers play instrumental role for child development in basic schools, it is therefore doubtful that the student-teachers can help develop the children at this critical stage of life.

On practice teaching, the on-campus teaching practice was not being given a full recognition in the curriculum. It was partially conducted in most of the BTE colleges with no clear document guidelines. The colleges conducted it in their own digression thereby given less time and attention to its success. In most of the cases, the student-teachers participation was not encouraging. During out-programme teaching practice also, many of the BTE colleges struggled to get schools to cooperate with them so as to allow the student-teachers to conduct the session for sixteen weeks. The struggle for school during out-programme session raises a question whether the curriculum is capable of promoting close working relationship between the BTE colleges and the local schools?

A review of the different education policies in this study has revealed that a curriculum needs to reflect the needs of the people of a country. The various education policies in the history of Ghana have also demonstrated that BTE curriculum has been influenced by the economic, social and political conditions of the country. Perhaps the BTE curriculum was influenced by the quest of policymakers to expose the Ghanaian children to social and economic dynamisms and civic awareness to adjust as useful citizens. But the sudden rise of anti-social activities in the country, the taste and interest for foreign culture and goods and rampantly flouting of laws and order have detrimental effect on the image of Ghana. It is expected that

the basic school teachers should help sanitize the system by instilling the spirit of patriotism, vocational skills and moral values in the basic school children. Since the basic school teachers cannot deliver what they do not have, the time has reached to relook the BTE curriculum.

Based on the foregoing issues raised about the BTE curriculum, it can be said that review is essential. About four years have passed but the curriculum has not been reviewed to understand its impact on the quality of basic school teachers in the country. Maybe it was attempted shoddily i.e., one or two of the BTE courses were partially evaluated. To properly review the curriculum, the entire curriculum must not be underestimated. An in-depth review would reveal how far the various curriculum components and elements have achieved the intended objectives.

6. Research Questions

The study was conducted in view of the following questions.

- i. How relevant are the objectives of the BTE curriculum for training student-teachers?
- ii. How far are the courses of the BTE curriculum appropriate for preparing student-teachers?
- iii. How far are the modes of BTE curriculum transactions appropriate for preparing student-teachers?
- iv. Which aspect of the BTE curriculum needs improvement?

6.1. Statement of the Problem

Evaluation of Basic Teacher Education Curriculum in Ghana

6.2. Objectives of the Study

The objectives for the study are as follows;

- i. To study the relevance of the BTE curriculum objectives
- ii. To study the appropriateness of the BTE curriculum contents
- iii. To study the modes of transactions of the BTE curriculum

6.3. Delimitation of the Study

The present study been delimited to general 3-year BTE curriculum (regular) that was implemented in 2014 by the Institute of Education UCC, Ghana. The curriculum has been operating at the BTE colleges leading to award of Diploma in Basic Education.

6.4. Explanation of Terms that were used in the Study

- i. **BTE Curriculum:** All the course contents, learning experiences provided, and activities that the students are made to engage in by the institution of teacher education. Here in the study it was the BTE curriculum of Ghana and all the aspects of it.
- ii. **Context Input Process Product (CIPP) Model:** Here the context is finding out the problems that might be hindering the success of the BTE curriculum objectives. The inputs are the available resources and strategies that are deemed appropriate for facilitating the success of the BTE curriculum. Process is plans and guidelines that guide the implementation of the curriculum and further assist the implementers and the beneficiaries to in turn judge the outcome. The product is a measure of actual outcomes of the BTE curriculum. The outcome was judged by observing the lesson taught by the basic school teachers who were the alumni of the curriculum.
- iii. **Curriculum transaction:** Here in the study the methods and approaches followed by the teacher educators to train the student-teachers. It includes transaction of foundation papers, core papers, electives, out programme and projects.
- iv. **Curriculum evaluation:** Curriculum evaluation included the relevance of curriculum objectives and appropriateness of the contents of the courses, classroom transactions in the teacher education colleges, process of out-programme and the project works from the perceptions and opinions of concerned people and educators.
- v. **Relevance.** In this study, relevance referred to the extent to which the BTE curriculum objectives are suitable for preparing basic school teachers as per the needs and aspirations of the citizens of Ghana.

7. Plan and Procedure of the Study

The plan and procedure of the study is presented here below,

7.1. Population of the Study

The population of the study consists of all the 43 public BTE colleges offering the BTE curriculum, 2014 and are affiliated to the University of Cape Coast (UCC), Ghana.

7.2. Data Needed for the Study

As per the objectives of the study, data needed were about three aspects of the BTE curriculum in operation in the affiliated colleges of UCC. The details of the needed data are presented below as per objectives of the study.

7.2.1. Objective-1: Relevance of the BTE Curriculum Objectives

To study the relevance of the BTE curriculum objectives; data needed were about the judgments and suggestions from the experts (directors of education, the principals of BTE colleges, and BTE tutors) and BTE graduates.

7.2.2. Objective-II: Appropriateness of the BTE Curriculum Contents

To study about the appropriateness of the contents of the courses for preparing basic school teachers, experts' judgements about its' appropriateness and modifications if any, were needed as data. Also, the efficacy and competencies of school teachers who had graduated from BTE colleges in the last three years were the data needed to study the appropriateness of the contents of BTE curriculum, 2014. Further data regarding the judgments of the final year student-teachers about the appropriateness of contents were needed.

7.2.3. Objective-III: Modes of Transactions of the BTE curriculum

Data were needed from the experts to study the plan of activities for student-teachers in the first two years (in-in programme) in the BTE colleges, and the out-programme sessions in the third year. These data are; the experts' judgements about the modes of transacting the practice teaching (out programme and on-campus), extra-curricular activities and co-curricular activities, project works, methods of teaching the various courses, assessment of student-teachers, and teaching and learning resources.

7.3 Sample for the study

The BTE curriculum in Ghana is designed by UCC academic council and is implemented in all its 43 colleges. Therefore to study the curriculum of BTE, it needs to be studied in all its colleges. But as all these colleges were having the same curriculum in operation, a representative sample of BTE colleges was considered to be appropriate. To have a representative sample of colleges, it was felt essential to select the colleges region-wise. As Ghana is divided into ten administrative regions and each region has some number of BTE colleges affiliated to UCC, one college from each region was selected by using stratified random sampling method. To select the sample, colleges were listed region-wise and from

the listed colleges of each region, one BTE college was selected by using lottery method. The subsequent sample selected are presented below.

1. Regional directors of education (10) from the ten regions of Ghana
2. Principals (10) from the BTE colleges (one from each college)
3. Tutors (120) from the BTE colleges (12 from each college)
4. Tutors (14) of Education and Professional Studies (EPS) from the BTE colleges
5. Basic school teachers (20), who are alumni of the BTE curriculum from 10 basic schools
6. Final year student-teachers (80) from the BTE colleges
7. Chairmen of Parent Teacher Association (10) from the selected basic schools

7.4. Tools and Techniques used for the Study

Based on the objectives of the study, data about the relevance of curriculum objectives, curriculum content, mode of transactions, and suggestions about how the curriculum could be modified were needed for the study. To collect the needed data to achieve the objectives, the following tools were used.

- i. Questionnaires (open-ended and close-ended) for the regional directors of education, principals and tutors of BTE
- ii. Observation lessons taught by alumni in basic schools and tutors of education and professional studies courses
- iii. Unstructured interview for PTA chairmen
- iv. Focus group discussion for final year student-teachers
- v. Documents analysis of 2014 BTE curriculum, Syllabus and lecture notes etc.

7.4.1. Questionnaires for the Regional Directors of Education and College Principals

Based on the objectives of the study, data were collected from the regional directors of education through questionnaire. Since the directors of education and the college principals are at the fore front of BTE college education and are involved in curriculum designing and implementation, it was thought that they were better fit persons to provide the needed data relating to the relevance of the curriculum objectives, contents appropriateness, modes of transactions and needed modification if any. By seeking the guidance of the guiding teacher, the researcher prepared the questionnaire by following the CIPP model. Here, it was essential to refer the BTE Curriculum document, 2014, that is in practice. The questionnaire therefore

was having open ended and close-ended questions. The aspects upon which the questions were framed alongside the number of items are presented in table-1.

Table-1: Types and Number of Questions by Sections of the Questionnaire

Sr. No	Section	Types of question	No. of items
1	Bio data,	Close ended	4
2	Relevance of BTE curriculum objectives	Close & open ended	5
3	Mode of transaction of BTE curriculum	Close ended	11
4	Practice teaching,	Open ended	4
5	Assessment of student-teachers,	Open ended	4
6	Accessible teaching and learning resources,	Close ended	5
7	Extra-curricular activities	Open ended	2
8	Emerging problems and suggested solutions.	Open ended	3

To ensure the validity of the questionnaire, it was given to five experts for validation. The experts were selected from the field of basic education having professional qualifications of Doctoral and Master degrees in education and more than having 15 years of teaching and administrative experience. The experts were composed of 2 professors from the field of education and 3 principals of BTE colleges. Based on the suggestions given by the experts, the questionnaire was modified.

7.4.2. Questionnaires for BTE Tutors

Noting that the course tutors were involved in the curriculum designing and transaction process, they were considered in the study to respond to questionnaire with a view that they would be able to provide needed data as per the objectives of the study. By seeking the guidance of the guide, the researcher prepared the questionnaire by following the CIPP model. Here, it was essential to refer the BTE Curriculum document, 2014 that is in practice. The BTE curriculum was referred to cover the following aspects; relevance of BTE curriculum objectives, appropriateness of BTE curriculum contents and mode of transactions. The contents aspect of the questionnaire were designed in different course areas as follow; Mathematics, the English language, Integrated Science, Social Studies, the Ghanaian language, Religious and Moral Education, HIV/AIDS, Physical Education, ICT, Pre-Vocational Skills, Education and Professional Studies and Music and Dance. As the courses differ in contents, the questionnaire items about the curriculum contents also differed from

one course to the other. In all the courses, the questionnaire items were designed based on their major topics and were having closed ended and open ended questions. To validate the questionnaire, it was given to five experts as stated in the above paragraph, and was subsequently modified based on their suggestions. This questionnaire was prepared under the following sections; **A**-Relevance of the curriculum objectives, **B**-Appropriateness of the curriculum content, **C**-Mode of transactions of the curriculum, **D**-Practice teaching, **E**-Assessment of student-teachers and **F**-Extra and co-curricular activities

7.4.3. Observation for BTE tutors

The researcher observed 14 lessons taught by tutors of the EPS courses. The courses are; principles and practice of education, principles and methods of teaching in basic school, educating the individual with special needs, trends in education and school management in Ghana, guidance and counselling, assessment in basic schools and research methodology in education. Though the researcher was not having a checklist, the observation was conducted as per the following themes; prepared lecture note by the tutors, lesson presentation, mastery of subject matter, classroom management, response from student-teachers and evaluation.

7.4.4. Observation for Basic School Teachers

The researcher observed 20 lessons taught by basic school teachers to find out how the teachers were applying knowledge and professional skills in planning and delivering of lessons in schools. Though the researcher was not having a checklist, the observation was conducted as per the following themes; prepared lesson note by the teachers, lesson presentation, mastery of subject matter, classroom management, response from students and evaluation.

7.4.5. Unstructured interview for Parent-Teacher Association (PTA) chairmen

Unstructured interview was used to collect data from PTA chairmen to find out their views about how the basic school teachers were equipping their wards with relevant knowledge and skills as per the needs of the society. They were also requested to give suggestions that could possibly be considered in modifying the mode of transacting the BTE curriculum. Here, the researcher did not have prearranged questions. Probe questions were used, and as per the responses that emerged, subsequent questions were developed. The responses of each of the PTA chairmen were tape recorded and subsequently transcribed.

7.4.6. Focus group discussion for final year student-teachers

The final year student-teachers were asked to express their views about the following themes; the appropriateness of the topics in the various courses of the BTE curriculum in terms of subject knowledge and pedagogy capable of teaching in basic schools. Also, they were requested to express their views about the teaching methods that their tutors were using to teach them in colleges. They were further requested to express the views about how practice teaching was organized. Here, particular attention was paid to the activities involved and how the observations in schools, on-campus and out-programme teaching practice were conducted and challenges that were encountered.

7.5. Data Presentation and Analysis

To achieve the objectives of the study, the researcher systematically organized the opinions given by the experts, observations of lessons taught by basic school teachers (alumni) and tutors and the views of final year student-teachers and the PTA chairmen about the BTE curriculum. As per the objectives, the researcher analysed the collected opinions by following the steps presented below.

1. The data were presented in three sections i.e. section-i relevance of the BTE curriculum objectives, section-ii the appropriateness of the BTE curriculum contents, and section-iii the modes of transactions of the BTE curriculum as per the objectives of the study. Under section-i, the collected data are the experts' opinions and observation of lessons taught by basic schools teachers, under section-ii, the collected data are opinions from the experts, final year student-teachers, observation of lessons taught by alumni in basic schools and lessons taught by EPS courses, and under section-iii, the collected data are opinions from the experts, final year student-teachers and the PTA chairmen about the modes of transactions of the BTE curriculum.
2. Judgments collected through close ended questions were subjected to descriptive statistics analysis by using frequencies and percentages. The closed ended questions, unstructured interview, observations and focus group discussions were analyzed by using content analysis.
3. In each of the three sections, suggestions were collected from the respondents for modification of the curriculum.

8. Tentative Findings of the Study

The tentative findings of the evaluation of BTE curriculum in Ghana are presented under three sections as per objectives of the study as follows.

8.4. Section-I: Relevance of the BTE Curriculum Objectives

As the BTE curriculum has four objectives, the findings were obtained for each one of them as follows:

8.4.1. Relevance of BTE Curriculum Objectives-I: Preparation of Generalist Teachers

- The experts, i.e. regional directors of education (50 percent), the principals of BTE (60 percent) and college tutors (94 percent) judged that the curriculum objective-I was irrelevant in terms of preparing student-teachers as per the needs of the society. Maybe the experts felt that the generalist teachers might be lacking in-depth knowledge of the subject matter. And lack of knowledge would render basic school teachers incompetent for teaching all the school subjects.
- Observation of lessons taught by the alumni in basic schools revealed that the generalist teachers were not having mastery of subject knowledge particularly in the English language, Mathematics and ICT.
- Observation of lessons taught by the alumni in basic schools revealed that the generalist teachers were not making their class inclusive.
- Observation of lessons taught by the alumni in basic schools revealed that generalist teachers were not competent to manage children who showed undesirable behaviors and attitudes in the classrooms.
- Observation of lessons taught by the alumni in basic schools revealed that some generalist teachers were not competent to teach some basic school subjects namely; Mathematics, ICT and Ghanaian language.
- The researcher further found that some lessons planned by some generalist teachers for teaching Integrated Science and ICT were sub-standard. Teaching and Learning Material (TLM) were stated in the lesson plans but were not properly utilized to engage the learners to achieve objectives.

8.4.2. Modification of BTE Curriculum Objective-I

The experts gave suggestions that the curriculum objective-I should be modified in the light of producing specialist teachers capable of managing inclusive classrooms and enforcing child-centred learning in basic school.

8.5. Relevance of curriculum objective-II: Produce Specialist Teachers for Specific

Subjects

- It was revealed by the experts, i.e. regional directors of education (80 percent), the principals of BTE (70 percent) and college tutors (70 percent) that curriculum objective-II was relevant in terms of preparing student-teachers for basic schools. Perhaps the experts were optimistic that this objective was relevant for preparing prospective teachers for acquiring vivid knowledge in subjects such as Mathematics, Science, Technical and French.
- Observation of lessons taught by the alumni in basic schools revealed that the specialist teachers who were teaching school subjects such as Mathematics, Integrated Science and Vocational Skills (Catering) were having mastery of content knowledge in their subject areas.
- The researcher also found that specialist teachers appropriately prepared and applied relevance Teaching and Learning Material (TLM) to actively engage students in learning activities in achieving many specific objectives.

8.5.1. Modification of BTE Curriculum Objective-II

The experts gave suggestions that the curriculum objective-II should be modified in the light of producing specialist teachers with research skills capable for enriching the curriculum.

8.6. Relevance of Curriculum Objective-III: Produce Teachers with Monitoring and Diagnosing Skills

- It was revealed by the regional directors of education (70 percent), principals of BTE (80 percent) and college tutors (71 percent) that the curriculum objective-III was relevant for preparing student-teachers for basic schools. Here, the experts might have felt that prospective teachers were receiving training that would enhance diagnosing and monitoring skills in teaching career in schools.
- Observation of lesson in basic schools revealed that appropriate teaching techniques were used by the teachers to guide the students on what to do, and subsequently utilized their responses effectively in developing the lessons.
- Teachers were able to establish clear parameters for students conduct in preventing misbehavior, and students' misbehaviors in classroom were dealt with by using firm but friendly strategies.
- It was further revealed that students participated actively in lessons as teachers monitored them to carry out activities.

8.6.1. Modification of BTE Curriculum Objective-III

The experts did suggest modification for the curriculum objective-III. They might have felt that this objective was relevant for preparing the student-teachers as per the needs of the society.

8.7. Relevance of Curriculum Objective-IV: Promote College-local Schools Relationship

- The judgments given by the regional directors of education (80 percent), principals of BTE (100 percent) and college tutors (78 percent) implied that the curriculum objective-IV was relevant in terms of preparing student-teachers as per the needs of the society. Perhaps the experts were of a conviction that the out-programme stage was a good approach to teacher preparation where student-teachers were allowed to practice in schools whatever theory they learned from college.
- It emanated from focus group discussion that final year student-teachers had an opportunity to visit interesting places in the communities for educational purposes. They occasionally visited a few historical places such as the palace, mosques and shrines and also attended cultural festivals. These opportunities bestowed on the final year student-teachers were probably stemmed from the relevance of the curriculum objective-IV.

8.7.1. Understanding the Relevance of Curriculum Objective-IV

Based on the judgments given by the experts, it can be said that the curriculum objective-IV promotes close working relationship between colleges of education and local schools through the “Out” component of the curriculum. To develop teacher education curriculum, one of the primary conceptions may be establishing close working relationship between communities and the institution. The relationship has to be mutually interrelated whereupon learning environment can be created to facilitate practice teaching in schools. Therefore, the researcher thought that this curriculum objective may be considered as one of the basic conceptions upon which this curriculum was conceived. Hence, it may not be given the autonomy to stand as a BTE curriculum objective.

9. Section II: Appropriateness of Curriculum Contents

The contents of 12 courses of the BTE curriculum were evaluated to understand how they were appropriate for preparing student-teachers for basic schools. The courses were categorized under foundation, education and professional studies, and practical courses. The tentative findings about the appropriateness of the course-wise contents are presented below.

9.1. Appropriateness of Mathematics Contents

The findings about the appropriateness of Mathematics contents are presented year-wise as follows:

9.4.1. First year Mathematics

- The Mathematics tutors (60 percent) judged that the contents were appropriate in terms of equipping the student-teachers with knowledge of mathematical concepts and procedures for problem solving in real numbers and operations.
- The Mathematics tutors (100 percent) judged that the contents were appropriate in terms of developing mathematical concepts and procedures for problem solving in equations and inequalities.
- Mathematics Tutors (70 percent) also judged that the contents were appropriate in terms of equipping student-teachers with knowledge in developing mathematical concepts and procedures for problem solving in geometry and trigonometry.
- The Mathematics tutors (50 percent) judged that the reading list was appropriate in terms of giving adequate and significant information in preparing prospective teachers.
- The researcher observed lessons taught by alumni in basic schools and found that teachers prepared comprehensive lesson notes as per given objectives.
- The researcher observed in basic schools that teaching and learning activities were logical and cumulative.
- Mathematics tutors (70 percent) indicated that two credit hours were inappropriate as per contact hours.
- The final year student-teachers revealed in focus group discussion that topics such as ‘logarithms’ and ‘Pythagoras theorem’ were not relevant in this curriculum for basic school teachers as the topics were not taught in basic schools.
- The final year student-teachers revealed in focus group discussion that the contents were theoretical-based, boring and were not as per their interest.

10.1.1.1. Modification of First year Mathematics

The Mathematics tutors and the final year student-teachers gave suggestions for modification of the contents of the first year Mathematics which include incorporation of methodology of teaching, and topics such as money and taxes’ and ‘factors and angles’.

10.1.2. Second year Mathematics

- The Mathematics tutors (70 percent) judged that the contents of second year Mathematics were appropriate in terms of achieving the set objectives. Perhaps the activities of this course contents were relevant for providing relevant knowledge to student-teachers as per given course objectives.
- The Mathematics tutors (50 percent) further stated that the contents were appropriate in terms of helping the student-teachers to be able to plan activities and prepare material for teaching mathematical concept.
- The Mathematics tutors (60 percent) judged the contents were inappropriate for equipping student-teachers with content knowledge and skills to apply matrices and binomial expansions to solve mathematical problems.
- The Mathematics tutors (60 percent) judged that two credit hours allotted for the second year Mathematics was inappropriate as per the contents.
- The student-teachers revealed in focus group discussion that the content weightage in this course was balanced as due weightage was given to theory and practicality.
- The student-teachers revealed in focus group discussion that the content sequent was appropriate and consolidating their previous knowledge and skills.
- The student-teachers revealed that the contents were appropriate in terms of providing knowledge on teaching methodology.
- The researcher observed lessons taught by alumni and found that the teachers demonstrated relevant subject knowledge linked to appropriate methodology as per the specific objectives.

10.1.2.1. Modification of Second year Mathematics

The Mathematics tutors and the final year student-teachers gave suggestions for modification of the contents of the second year Mathematics which include; infusing of ICT, increase in credit hours to three and offload of 2×2 matrix' from the contents.

10.1.3. Third year Mathematics

- The Mathematics tutors (60 percent) further revealed that the contents were appropriate in terms of helping student-teachers to demonstrate knowledge of basic statistics and probability and applying them in real life situations.

- The Mathematics tutors (60 percent) judged that the contents were inappropriate in terms of empowering student-teachers on the use of calculators and spreadsheets to solve mathematical problems.
- The Mathematics tutors (70 percent) revealed the two credit hours allotted for the third year Mathematics was inappropriate to measure the activities of the content.
- The Mathematics tutors (70 percent) also judged that the reading list was archaic and inappropriate for the course.
- Final year student-teachers revealed in focus group discussion that topics such as; experiments and probability of simple events, conditional probability, regression, correlation and calculation of Spearman's coefficient of correlation were useful for analyzing assessment scores in class and their dissertations.
- Final year student-teachers revealed that the contents were not appropriate for training them on the use of spreadsheets and calculators to solve complex mathematical problems.
- The researcher observed lessons taught by alumni and found that they were able to demonstrate relevant subject knowledge and linked to specific objectives.
- It was also observed that the teachers used appropriate techniques to ensure active student participation.

10.1.3.1. Modification of Third year Mathematics

The Mathematics tutors and the final year student-teachers gave suggestions for modification of the contents of the third year Mathematics which include; comprehensive contents on the use of spreadsheets, and upgrade of reading list.

10.2. Integrated science

There are four aspects of Integrated Science namely; Chemistry, Physics, Biology and Agricultural Science. Tentative findings about the appropriateness of these aspects are presented below.

10.2.1. First year Chemistry

- The Integrated Science tutors (50 percent) judged that the contents were appropriate in terms of helping student-teachers to acquire knowledge of chemical compounds and mixtures.

- The Integrated Science tutors (50 percent) judged that the content was inappropriate in terms of helping the student-teachers to perform practical activities related to the different aspects of the course.
- The Integrated Science tutors (70 percent) revealed that 2 credit hours were inappropriate for the course.
- The Integrated Science tutors (70 percent) also judged that the reading list was inappropriate in terms of giving insufficient and archaic books.
- The final year Student-Teachers revealed in focus group discussion that the contents of the first year chemistry were inappropriate for skills development as practical activities were not encouraged for the student-teachers to practice the theory learned
- Observation of chemistry lesson taught by alumni in schools revealed that the teachers demonstrated knowledge of the subject matter but not competent to use appropriate methodology to develop purposive learning environment where students could practice the concepts.

10.2.1.1. Modification of First year Chemistry

The Integrated Science tutors and the final year student-teachers gave suggestions for modification of the contents of the first year chemistry which include; incorporation of laboratory experience, update of reading list and increase in credit hours to two.

10.2.2. First year Physics

- The Integrated Science tutors (50 percent) also judged that the contents were appropriate in terms of helping student-teachers to acquire knowledge of ‘force, effects and its Applications’.
- The Integrated Science tutors (60 percent) further revealed that the contents were appropriate in terms of relating previous knowledge of student-teachers to learning of new concepts.
- The Integrated Science tutors (60 percent) judged that the contents were inappropriate in terms of helping the student-teachers to perform practical activities related to measurements and energy.
- The Integrated Science tutors (60 percent) judged that two credit hours were inappropriate as per the activities in these contents.
- The Integrated Science tutors (50 percent) also judged that the reading list was inappropriate as it contained outmoded and insufficient books.

- Observation of alumni in schools revealed that basic school teachers were not competent in using appropriate TLA to engage students in practical activities that involve handling and use of measuring instruments such as beam balance, and thermometers to measure physical quantities accurately.
- Focus group discussion with final year student-teachers revealed that sufficient practical training was not given on some Physics topics such as ‘measurement’ and ‘light energy’ which would be affecting the professional standards of school teachers.

10.2.2.1. Modification of First year Physics

The Integrated Science tutors and the final year student-teachers gave suggestions for modification of the contents of the first year Physics which include; incorporation of methodology of teaching physics, update of reading list and increase in credit hours to four.

10.2.3. First year Biology

- The Integrated Science tutors (70 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of the structure and functions of the various reproductive systems in humans.
- The Integrated Science tutors (50 percent) further revealed that the contents were appropriate in terms of equipping student-teachers with knowledge of infections, antibodies and immunization.
- Final year student-teachers revealed that the contents have appropriate and interesting topics namely; ‘reproduction and growth in human’, ‘circulatory system’, ‘diffusion and osmosis in plants and animals’ and ‘food and nutrition in plants and animals’.
- Integrated Science tutors (60 percent) revealed that two credits hours were not appropriate as per the contents.
- Integrated Science tutors (60 percent) also felt reading list was archaic and inappropriate to provide relevance information for the course.
- Observation of alumni revealed that the teachers were competent to demonstrate relevant subject knowledge which was linked to appropriate methodology to achieve the objectives of the lesson.

10.2.3.1. Modification of First year Biology

The Integrated Science tutors and the final year student-teachers gave suggestions for modification of the contents of the first year Biology which include; incorporation of

multimedia material such as videos and games, update of reading list and increase in credit hours to three.

10.2.4. First year Agriculture Science

- The Integrated Science tutors (50 percent) also agreed that the contents were appropriate in terms of equipping student-teachers with knowledge in separating soil into gravel, sand, silt, clay and organic fractions.
- The Integrated Science tutors (50 percent) also indicated that the contents were appropriate in terms of equipping student-teachers with knowledge of diseases, pests and parasites of crops and could instigate control mechanisms.
- The Integrated Science tutors (60 percent) also judged that the reading list was inappropriate as having outmoded and insufficient books.
- Integrated Science tutors (60 percent) indicated that two credit hours were inappropriate in terms of contact hours.
- Observation of alumni revealed that the teacher presented concepts logically and clearly by using relevant examples to ensure students participation.
- Final year student-teachers revealed that practical oriented Agriculture Science topics were not taught on farms.

10.2.4.1. Modification of First year Agriculture Science

The Integrated Science tutors and the final year student-teachers gave suggestions for modification of the contents of the first year Agriculture Science which include; incorporation of experimental farms, update of reading list and increase in credit hours to three.

10.2.5. Second year Integrated Science

Four aspects of the Integrated Science namely; Chemistry, Physics, Biology and Agriculture Science were studied in the second year. The tentative finding about the appropriateness of the contents are presented below.

10.2.5.1. Second year Chemistry

- The Integrated Science tutors (70 percent) judged that the contents were appropriate in terms of equipping student-teachers with theoretical knowledge on acid, base, salt and indicators.

- Integrated Science tutors (50 percent) judged that these contents were inappropriate in terms of helping the student-teachers to perform practical activities related to acid, base, salt and indicators.
- Integrated Science tutors (70 percent) revealed that one credit hour was inappropriate as per the contents.
- Integrated Science tutors (60 percent) also judged that the reading list was inappropriate in terms of providing relevant modern books.
- Observation of lesson taught by basic school teachers revealed that the teachers were equipped with knowledge of the subject matter but were lacking skills to guide students to perform experiment on Chemistry in schools.

10.2.5.1.1. Modification of Second year Chemistry

The Integrated Science tutors and the final year student-teachers gave suggestions for modification of the contents of the Second year Chemistry which include; incorporation of adequate contents on pedagogy, update of reading list and increase in credit hours to three.

10.2.5.2. Second year Physics

- The Integrated Science tutors (70 percent) judged that the contents were appropriate in terms of achieving given objectives. The tutors may have noticed that the contents were sufficient to provide required content knowledge to student-teachers.
- The Integrated Science tutors (60 percent) also judged that the contents were appropriate in terms of equipping student-teachers with knowledge of ‘current, potential difference and resistance’.
- The Integrated Science tutors (50 percent) further indicated that the contents were inappropriate in terms of equipping student-teachers with knowledge for investigating ‘operation inductor and capacitor’ when connected in parallel and series electronic circuit.
- The Integrated Science tutors (70 percent) further revealed that the contents were inappropriate in terms of giving experiment on energy, electricity and basic electronics’.
- Integrated Science tutors (80 percent) judged that 2-credit hours were inappropriate as per the contents.
- Also, the Integrated Science tutors (70 percent) revealed most of the books in the reading list were outdated and inappropriate to give required knowledge.

- Observation of lesson taught by basic school integrated science teachers revealed that the teachers were equipped with knowledge but were not competent to use TLM as stated in the lesson plan to achieve lessons objectives.
- The final year student-teachers revealed that the contents of second year Physics were overloaded with challenging topics that were meant to be taught within a limited time (one semester).

10.2.5.2.1. Modification of Second year Physics

The Integrated Science tutors and the final year student-teachers gave suggestions for modification of the contents of the Second year Physics which include; incorporation of methodology of teaching, update of reading list and increase in credit hours to four.

10.2.5.3. Second year Biology

- The Integrated Science tutors (70 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of respiratory, circulatory and excretory systems in humans.
- The Integrated Science tutors (70 percent) further agreed that the contents were appropriate in terms of enhancing the understanding of student-teachers about the causes, symptoms and prevention of malaria.
- Integrated Science tutors (70 percent) revealed that the contents were inappropriate in terms of giving practical training in laboratory works.
- Integrated Science tutors (60 percent) judged that two credit hours were inappropriate as per the contents.
- Integrated Science tutors (50 percent) judged that most of the books in the reading list were outdated and inappropriate to give required information.
- Observation of lesson taught by basic school integrated science teachers revealed that the teacher was equipped with subject knowledge which was appropriately used to link to the previous knowledge of the students as per the objectives of the lesson.
- The final year student-teachers revealed that many topics namely; reproductive system in human, circulatory system in humans and health and diseases educated them about healthy living which are relevant in basic schools.
- The final year student-teachers revealed that Biology tutor were not using appropriate methodology to enhance practicality.

10.2.5.3.1. Modification of Second year Biology

The Integrated Science tutors and the final year student-teachers gave suggestions for modification of the contents of the Second year Biology which include; incorporation of methodology of teaching, contents on dissecting of mammals, update of reading list and increase in credit hours to three

10.2.5.4. Second year Agriculture Science

- The Integrated Science tutors (70 percent) also judged the contents were appropriate in terms of equipping student-teachers with knowledge of soil and water conservation.
- The Integrated Science tutors (70 percent) further indicated that the contents were appropriate in terms of equipping student-teachers with knowledge in recognizing the general principles in animal production.
- Integrated Science tutors (60 percent) also revealed the contents were inappropriate in terms of experiment. Since experiment is critical in agriculture science, the tutors might have noticed that student-teachers were not receiving appropriate training relating to practical activities in the course.
- Integrated Science tutors (60 percent) judged that two credit hours were inappropriate in terms of contact hours.
- Observation of Agriculture Science lesson taught by basic school Integrated Science teachers revealed that the teacher demonstrated subject knowledge and competencies in methodology of teaching as per the objectives.
- The final year student-teachers revealed that the contents were duly balanced in terms of theory and methodology.

10.2.5.4.1. Modification of Second year Agriculture Science

The Integrated Science tutors and the final year student-teachers gave suggestions for modification of the contents of the Second year Agriculture Science which include; incorporation Agricultural Experimental Research Projects, update of reading list and increase in credit hours to four.

10.3. English Language

The appropriateness of the contents of the BTE English language is presented below.

10.3.1. First year English Language

- The English Language tutors (60 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge in writing formal, semi-formal informal and letters using the appropriate language and formats.
- English Language tutors (70 percent) judged that the contents were appropriate in terms of developing writing and communication skills in student-teachers.
- The English Language tutors (80 percent) judged that two credit hours were not appropriate as per the contents.
- The English Language tutors (60 percent) judged that the reading list was appropriate in terms of providing relevant and adequate information for studying the course.
- Observation of English Language lesson taught by basic school teachers revealed that English Language teachers demonstrated appropriate subject knowledge as per the objectives.
- Observation of English Language lesson taught by basic school teachers revealed that the teachers used appropriate techniques to facilitate active students' participation and cooperation that led to progressive learning.
- The final year student-teachers revealed that the contents were appropriate for preparing student-teachers in grammar, speech work, writing, reading and literature.
- The final year student-teachers revealed that the contents were not appropriate to train student-teachers in drama and performance on the genres of literature.

10.3.1.1. Modification of First year English Language

The English language tutors and the final year student-teachers gave suggestions for modification of the contents which include; incorporation of methodology of teaching in the first year, and increase in credit hour to four.

10.3.2. Second year English Language

The tentative findings about the appropriateness of the second year English Language are presented below.

- The English Language tutors (70 percent) judged that the contents were appropriate in terms of equipping student-teachers with skills for writing comprehensive lesson notes.
- The English Language tutors (70 percent) also agreed that the contents were appropriate in terms of equipping student-teachers with knowledge and skills for studying English as a second language.

- The English Language tutors (80 percent) also judged that three credit hours were appropriate as per the contents.
- The student-teachers revealed in focus group discussion that the contents weightage were duly balanced as sufficient contents were covered on methodology as well as subject matter.
- Observation of English Language lesson taught by basic school teachers revealed the teachers were competent to prepare a comprehensive lesson as per the interest of the learner.
- It was observed that the basic school English Language teacher were competent to use appropriate methodology to direct students learning.

10.3.2.1. Modification of second year English Language

The English language tutors and the final year student-teachers gave suggestions for modification of the contents which include; creation of teaching English as Second Language, and update of reading list.

10.3.3. Third year English Language

- The English Language tutors (60 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge and skills for writing argumentative essay and debate.
- The English Language tutors (70 percent) felt the contents were appropriate in terms of exposing student-teachers to grammar rules, analysis of ambiguity and error of sentences.
- The English Language tutors (50 percent) further judged that the contents were appropriate to equip the student-teachers with knowledge of elements of a language.
- The English Language tutors (80 percent) further judged that three credit hours were appropriate as per contents.
- Observation of English Language lesson taught by basic school teachers revealed that the basic school teachers were competent in using appropriate methodology for teaching grammar in basic schools and to establish a balanced between teacher's activities and students' activities.
- The student-teachers revealed in focus group discussion that the training given on the grammar rules and usage, argumentative and debate writing were was vital for vocabulary development.

- The student-teachers also revealed in focus group discussion that the concept of debate was not given due practice in BTE curriculum.

10.3.3.1. Modification of Third year English Language

The English language tutors and the final year student-teachers gave suggestions for modification of the contents which include; creation of debating clubs, and update of reading list.

10.4. Appropriateness of the Contents of First year Education and Professional Studies

In the first year of BTE curriculum, student-teachers were taught two aspects of Education and Professional Studies (EPS) courses namely; Principles and Practice of Education, and Principles and Methods of Teaching in Basic School. The tentative findings about the appropriateness of the contents of these aspects are presented below.

10.4.1. Principles and Practice of Education

- EPS tutors (60 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of philosophical and sociological principles underlying current Ghanaian educational practices.
- EPS tutors (50 percent) agreed that the contents were appropriate in terms of equipping student-teachers with knowledge of curriculum, design process and types.
- EPS tutors (50 percent) judged that the contents of principles and practice of education were appropriate in terms of pedagogy and developing professionalism in potential teachers.
- Observation of lesson taught by tutors of Principles and Practice of Education in BTE colleges revealed that tutors of the course were having relevant knowledge of the contents.
- It was however observed that the tutors were not using a variety of teaching methods to fully involve the student-teachers in the lessons.
- It was also observed that the tutors were not using teaching aids to facilitate the lessons.
- The student-teachers also revealed in focus group discussion that the contents were interesting and were significant as giving a foundation to the student-teachers in their teaching career.
- Student-teachers further revealed that they were exposed to the concepts of curriculum rudiments though they were not practically involved in any design process.

10.4.1.1. Modification of Principles and Practice of Education

The EPS tutors and the final year student-teachers gave suggestions for modification of the contents of the Principles and Practice of Education that include; incorporation of contents on the process and practices of teacher education and policies of basic teacher education in Ghana.

10.4.2. Principles and Methods of Teaching in Basic School

- The EPS tutors (60 percent) judged that the contents were appropriate in terms of introducing the student-teachers to a variety of teaching methods.
- The EPS tutors (70 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge for designing lesson plans.
- Observation of lessons taught by tutors of this course in BTE colleges revealed that the tutor demonstrated knowledge of the subject matter by giving extensive lecture on factors to consider when planning instruction as per the topic.
- It was also observed that the tutors were not enforcing classroom management technique to control misbehavior.
- The student-teachers revealed in focus group discussion that the lesson plan, teaching methods and classroom management techniques were crucial for teacher preparation and as prospective teachers they felt the contents were appropriate as per their professional needs.

10.4.2.1. Modification of Principles and Methods of Teaching in Basic School

The EPS tutors and the final year student-teachers gave suggestions that were very crucial for modification of the contents of the Principles and Methods of Teaching in Basic School.

10.4.3. Second year Education and Professional Studies

In the second year of BTE curriculum, student-teachers were taught two aspects of Education and Professional Studies (EPS) courses namely; Educating the Individual with Special Needs, and Trends in Education and School Management in Ghana. The tentative findings about the appropriateness of the contents of these aspects are presented below.

10.4.3.1. Educating the Individual with Special Needs

- The EPS tutors (70 percent) also judged that two credit hours were appropriate as per the contents of the course.

- The EPS tutors (50 percent) judged that the reading list was not having sufficient and updated books which were capable of giving relevant information to teaching and learning of this course.
- The EPS tutors (40 percent) also judged that the contents were inappropriate in terms of equipping student-teachers with knowledge capable of identifying children with special needs in the classrooms.
- Observation of lessons taught by tutors of this course in BTE colleges revealed that the tutor did not show evidence of enthusiasm in teaching, therefore were not involving the student-teachers in discussion.
- It was also observed that the tutors were not impressing the student-teachers by using sufficient relevant examples to explain and clarify concepts.
- The student-teachers revealed in focus group discussion that the contents of this course did not have sufficient contents which would help student-teacher to be able to identify children with special needs in classrooms.
- The student-teachers revealed that the contents were not appropriate to train student-teachers to be able to identify early symptoms and abnormal behavior that children are likely to show in classrooms.

10.4.3.1.1. Modification of Educating the Individual with Special Needs

The EPS tutors and the final year student-teachers gave suggestions that were very crucial for modification of the contents of the Educating the Individual with Special Needs.

10.4.4. Trends in Education and School Management in Ghana

- The EPS tutors (60 percent) stated that the contents were appropriate in terms of equipping student-teachers with knowledge of school management tasks and leadership functions.
- The EPS tutors (70 percent) that the contents were appropriate in terms of exposing student-teachers to the trends and contemporary issues in educational development in Ghana.
- The EPS tutors (50 percent) judged that the contents were inappropriate to equip student-teachers with knowledge of records keeping and record use in educational administration in Ghana.

- The EPS tutors (80 percent) also judged that the 2 credit hours of this course were inappropriate as per the contents.
- The EPS tutors (60 percent) also judged that the reading list was not having relevant authors to facilitate teaching and learning of this course.
- Observation of lessons taught by tutors of this course in BTE colleges revealed that the tutors demonstrated relevant subject knowledge by using variety of teaching techniques to ensure student-teacher participation.
- It was also observed that constructive responses from the student-teachers were accepted by the tutors and subsequently summarized the lesson by stating core points which were linked to the objectives.
- The student-teachers revealed in focus group discussion that the contents were appropriate for exposing them to some of the management tasks in schools and some useful managing techniques.

10.4.4.1. Modification of Trends in Education and School Management in Ghana

The EPS tutors and the final year student-teachers gave suggestions that were very crucial for modification of the contents of the Trends in Education and School Management in Ghana.

10.4.5. Third year Education and Professional Studies

In the third year of BTE curriculum, student-teachers were taught two aspects of Education and Professional Studies (EPS) courses namely; Introduction to Guidance and Counselling, Assessment in Basic Schools and Research Methodology in Education. The tentative findings about the appropriateness of these aspects of the course are presented below.

10.4.5.1 Introduction to Guidance and Counselling

- The EPS tutors (60 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of providing guidance and counselling services in schools.
- The EPS tutors (50 percent) judged that the contents were appropriate in terms of exposing student-teachers to approaches and techniques of guidance and counselling process.
- The EPS tutors judged that two credit hours (70 percent) were inappropriate as per the contents of this course.
- The EPS tutors (70 percent) judged that the reading list was not having sufficient relevant books as per the contents.

- Observation of lessons taught by tutors of this course in BTE colleges revealed that the tutor demonstrated knowledge of the subject matter linked to the objectives
- It was also observed that a variety of teaching techniques were not used to ensure student-teacher participation
- The student-teachers revealed in focus group discussion that the contents were not duly balanced as practicality was not given the due weightage.

10.4.5.1.1. Modification of Introduction to Guidance and Counselling

The EPS tutors and the final year student-teachers gave suggestions that were very crucial for modification of the contents of the Introduction to Guidance and Counselling.

10.4.5.2. Assessment in Basic Schools

- EPS tutors (50 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of educational assessment principles, methods and practices.
- The EPS tutors (70 percent) judged that the contents were not appropriate in terms of equipping the student-teachers with knowledge and skills to be able to use assessment result for further teaching.
- The EPS tutors (70 percent) judged that the reading list was not appropriate in terms of relevant updated information as per these contents.
- The EPS tutors (60 percent) judged that the credit hours were not appropriate as per the contents.
- Observation of lessons taught by tutors of this course in BTE colleges revealed that the responses from the student-teachers were not encouraging maybe the teaching methods used by the tutor were inappropriate for ensuring student-teacher participation.
- The student-teachers suggested in focus group discussion that it was practically impossible for them to apply the assessment results for further teaching.
- The student-teachers felt that practicality was not given its due weightage.

10.4.5.2.1. Modification of Assessment in Basic Schools

The EPS tutors and the final year student-teachers gave suggestions about update of reading lists and increase in credit hours for effective training of prospective teachers in this course.

10.4.5.3. Research Methods in Education

- The EPS tutors (60 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of the different types of researches conducted in education.
- The EPS tutors (60 percent) judged that the contents of this course were appropriate in terms of equipping student-teachers with knowledge about the steps in scientific inquiry.
- The EPS tutors (50 percent) judged that the contents of this course was appropriate in terms of equipping student-teachers with skills of applying scientific inquiry to solving problems in education.
- The EPS tutors (80 percent) judged that one credit hour was not appropriate as per the contents of this course.
- The EPS tutors (60 percent) also judged that the reading list was inadequate and could not give appropriate information as per the activities of the contents.
- Observation of lessons taught by tutors of this course in BTE colleges revealed that the teaching and learning activities were logical and cumulative as tutors used appropriate techniques and got student-teachers involved actively in discussions.
- The student-teachers revealed in focus group discussion that these contents have created an opportunity for student-teachers to apply their knowledge in identifying and managing emerging problems in education.
- The student-teachers revealed that the contents were been challenged by insufficient contact hours and poor supervision in project work.

10.4.5.3.1. Modification of Research Methods in Education

The EPS tutors and the final year student-teachers gave suggestions that were very crucial for modification of the contents of the Research Methods in Education.

10.5. Appropriateness of the Contents of Pre-Vocational Skills

There are three aspects of Pre-vocational Skills in BTE curriculum namely; Catering, Creative Art and Technology and Home Economics-Sewing. Tentative findings about the appropriateness of these aspects are presented below.

10.5.1. Catering

- The Pre-Vocational Skills tutors (50 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge and skills in using catering tools and equipment for preparing food.

- The Pre-Vocational Skills tutors (50 percent) revealed that the contents were appropriate in terms of developing the qualities of professional caterer in the student-teachers.
- The Pre-Vocational Skills tutors (60 percent) further judged that the activities of the contents were appropriate in equipping the student-teachers with knowledge of causes and prevention of food poisoning.
- The Pre-Vocational Skills tutors (70 percent) felt that one credit hour was insufficient to cover the activities of the course.
- The Pre-Vocational Skills tutors (70 percent) stated that the reading list was inadequate to provide updated information as per the activities of the contents.
- The student-teachers revealed in focus group discussion that they were not given opportunity to practice in the kitchen whatever theory they acquired from the contents.
- Observation of lessons taught by basic school teachers of this course revealed that the teachers lacked practical knowledge in teaching the subject in basic schools.

10.5.1.1. Modification of Catering

The Pre-Vocational Skills tutors and the final year student-teachers gave suggestions meant to increase in credit hours and incorporation of methodology of teaching Catering in these contents.

10.5.2. Creative Art and Technology

- The Pre-Vocational Skills tutors (40 percent) also stated that the contents were appropriate for equipping the student-teachers with knowledge of concepts and activities in Creative Art and Technology.
- The Pre-Vocational Skills tutors (50 percent) also judged that the contents were appropriate for developing good social values and creativity through creative art.
- The Pre-Vocational Skills tutors (40 percent) judged that the contents were inappropriate for developing skills in designing and creating artifacts based on given theme.
- On credit hours, the Pre-Vocational Skills tutors (80 percent) judged that one credit hour was inappropriate for as per the activities of the contents.
- The Pre-Vocational Skills tutors (80 percent) also indicated the reading list was inappropriate in give the relevant information as per these contents.

- The student-teachers revealed in focus group discussion that the contents were not really developing their creative skills. They lamented that they were not having practical skills to be able to produce beautiful artifacts.
- Observation of lessons taught by basic school teachers of this course revealed that the teachers were not achieving specific objectives because the students were not made to experiment modelling and casting of items as per the stated objectives.

10.5.2.1. Modification of Creative Art and Technology

The Pre-Vocational Skills tutors and the final year student-teachers gave suggestions meant to update the reading list and incorporation of art period in the time tables for student-teachers to be able to practice their skills.

10.5.3. Home Economics-Sewing

- The Pre-Vocational Skills tutors (50 percent) judged that the contents of this course were appropriate for equipping the student-teachers with knowledge of parts of the sewing machine.
- The Pre-Vocational Skills tutors (70 percent) judged that the contents were appropriate for helping the student-teachers to describe how to care for the sewing machine.
- The Pre-Vocational Skills tutors (50 percent) felt that the student-teachers could not conduct simple identification tests in identifying fabrics.
- The Pre-Vocational Skills tutors (50 percent) judged that the contents were inappropriate for helping the student-teachers to understand different methods of obtaining patterns in making up garments.
- The Pre-Vocational Skills tutors (60 percent) judged that one credit hour was inappropriate for the course.
- The tutors (80 percent) also indicated that the reading list was inappropriate to give relevant information as per the activities of the contents.
- The student-teachers revealed in focus group discussion that the contents of this course appropriately provided basic knowledge about sewing which can subsequently be improved by student-teachers who will like to pursue sewing as a career.
- The student-teachers also revealed that the contents were not duly balanced between theory and practicality.

- Observation of lessons taught by basic school teachers of this course revealed that the basic school teachers were not guiding the pupils to experiment their knowledge in this subject in weaving and stitching lessons.

10.5.3.1. Modification of Home Economics-Sewing

The Pre-Vocational Skills tutors and the final year student-teachers gave suggestions that method of teaching home economics-sewing should have a place in BTE curriculum.

10.6. Appropriateness of Religious and Moral Education (RME) Contents

The findings about the appropriateness of RME contents are presented year-wise as follows.

10.6.1. First year RME

- The judgment given by RME tutors (60 percent) showed that the contents were appropriate in terms of helping student-teachers to identify the “religious” and “non-religious” sources of morality.
- The RME tutors (50 percent) also judged that the contents were appropriate in terms of impacting knowledge and understanding of Moral Development Theories onto the student-teachers.
- The RME tutors (80 percent) judged that one credit hour was inappropriate as per the contents.
- The RME tutors (60 percent) also judged that the reading list was inappropriate to give require information as per the activities of the contents.
- The student-teachers revealed in focus group discussion that the educational implication embedded in the contents of RME made the course interesting to study.
- The student-teachers however revealed that though the Religious Development Theories were educative, information about educational implications was not sufficient.
- Observation of lessons taught by basic school teachers of this course revealed that the teachers were having knowledge of the subject matter, but were allowing their religious background to have influence over the choice of methodology.

10.6.1.1. Modification of first year Religious and Moral Education

The RME tutors and the final year student-teachers gave suggestions that religious leadership and practices for quality practices in religious leadership should be incorporated in these contents.

10.6.2. Second year Religious and Moral Education

- The RME tutors (50 percent) judged that the contents of this course were appropriate in terms of preparing student-teachers capable of applying the modern approaches to the teaching of RME in schools.
- It was further judged by the RME tutors (60 percent) that the contents were appropriate in terms of equipping student-teachers with knowledge of lesson planning for the teaching of RME in basic schools.
- The judgment given by the RME tutors (60 percent) showed that the contents were insufficient as per the set objectives.
- The RME tutors (50 percent) further judged that the contents were inappropriate in terms of construction of test items and their corresponding scoring guide.
- The RME tutors (80 percent) judged that one credit hour was inappropriate as per the contents.
- The RME tutors (80 percent) also judged that the reading list was inappropriate in terms of giving require information in this course.
- Observation of lessons taught by basic school teachers of this course revealed that the main approaches to teaching of RME (existential, dimensional and value clarification), as enshrined in the RME syllabus of BTE curriculum, were appropriate and crucial for providing general knowledge about the teaching of the course.
- The student-teachers revealed in focus group discussion that appropriate opportunity was created in these contents for them to study components of lesson plan to be able to plan effective lessons in basic schools.

10.6.2.1. Modification of Second year RME Contents

The RME tutors and the final year student-teachers gave suggestions that methodology of teaching religion by using appropriate terminology from the three main religions (Christianity, Islamic and African Traditional Religion) in Ghana and should be incorporated in these contents.

10.7. Appropriateness of Environmental and Social Studies (E/SS) Contents

The findings about the appropriateness of E/SS contents are presented year-wise as follows.

10.7.1. First year Environmental and Social Studies

- The E/SS tutors (50 percent) judged that the contents were appropriate for equipping student-teachers with knowledge and skills for describing the environment by using the physical features, social features and cultural features.
- The E/SS tutors (70 percent) also judged the contents were appropriate for developing knowledge of the student-teachers to make rational decisions about land use.
- The E/SS tutors (40 percent) judged that the contents were not capable of equipping the student-teachers with adequate knowledge of Ghana relations with international organizations and agencies.
- The E/SS tutors (80 percent) also judged that one credit hour was inappropriate for the contents. It was further judged by the
- E/SS tutors (100 percent) that the reading list was not appropriate as per the contents.
- The student-teachers revealed in focus group discussion that the contents were laden and could not be completed in one year.
- Observation of lessons taught by basic school teachers of this course revealed that the teachers were having knowledge of the subject matter to present lessons logically and clearly as per the objectives.
- It was also observed that the contents of first year E/SS were not appropriate of equipping basic schools teachers with methodology of teaching the subject in basic schools.

10.7.1.1. Modification of first year Environmental and Social Studies

The E/SS tutors and the final year student-teachers gave suggestions to update reading list and increase in credit hours to three.

10.7.2. Second year Environmental and Social Studies

- The E/SS tutors (70 percent) also judged that the contents were appropriate in terms of equipping student-teachers with knowledge and skills to participate in socio-economic development of Ghana.
- It was further judged by the E/SS tutors (50 percent) that the contents were appropriate for equipping student-teachers with knowledge on varieties of resources, their development and utilization for sustainable development in Ghana.
- The E/SS tutors (50 percent) judged the contents were appropriate for developing student-teachers' idea and propensity to save money and invest productively.

- The E/SS tutors (60 percent) judged the contents were appropriate empowering student-teachers with knowledge and skills to use schemes of work in preparing lessons.
- The judgment made by E/SS tutors (50 percent) showed that the contents were inappropriate in terms of preparing student-teachers for embracing the essence of population dynamics in relation to productivity in Ghana.
- Also, the judgments made by E/SS tutors (100 percent) showed that one credit hour was inappropriate in terms of giving content hours to the course.
- It was further judged by the E/SS tutors (100 percent) that the reading list was inappropriate for the course. Maybe the reading list was outdated and insufficient to provide relevant information for the course.
- The student-teachers disclosed in focus group discussion that the contents were capable of equipping them with knowledge of discovering and analyzing values and perspectives regarding new ideas and events. Additionally, it developed their conceptual understandings about issues and the ways people make informed decisions and participate in social activities.

10.7.2.1. Modification of Second year Social Studies

The E/SS tutors and the final year student-teachers gave suggestions regarding update of reading list and increase in credit hours to three, and the contents should be organized as a sequence of concentric circles i.e., beginning with the self and progressively to the family, school, neighbourhood, and eventually reaching the international communities.

10.8. Appropriateness of HIV/AIDS Education Contents

The HIV/AIDS Education was taught in only one semester in the first year of the BTE curriculum. Tentative findings about the appropriateness of the contents are presented below.

- The HIV/AIDS Education tutors (80 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of HIV and AIDS awareness.
- It was further revealed by HIV/AIDS Education tutors (50 percent) that the contents were appropriate for equipping student-teachers with knowledge and skills to prevent the spread of HIV and AIDS.
- The HIV/AIDS Education tutors (70 percent) also judged the contents were appropriate for helping student-teachers to behave responsibly in the world of HIV and AIDS.

- The HIV/AIDS Education tutors (70 percent) further judged that these contents were appropriate in terms of helping student-teachers in building supportive environment for people living with HIV and AIDS.
- The HIV/AIDS Education tutors (60 percent) judged that the contents were appropriate in terms of exposing student-teachers to impact of HIV/ AIDS on education.
- The student-teachers judged in focus group discussion that this course had incorporated appropriate contents that were capable of improving their health and well-being through counselling and testing and education on the consequences of HIV/AIDS on individual, family community and nation.
- The student-teachers further judged that this course was not taught in basic schools though, they would be instrumental for awareness creation and building supportive environment for people living with HIV and AIDS in schools and communities.
- The judgments made by HIV/AIDS Education tutors (50 percent) judged that one credit hour was inappropriate in terms of giving content hours to the course.
- It was further judged by the HIV/AIDS Education tutors (80 percent) that the reading list was inappropriate for the course.

10.8.1. Modification of HIV/AIDS education

The HIV/AIDS education tutors and the final year student-teachers gave suggestions which include infusion of HIV/AIDS education in other subjects, and establishment of health clubs on HIV/AIDS avoidance in colleges.

10.9. Appropriateness of the Contents of Information and Communication Technology (ICT)

The ICT was taught in only one semester in the second year of the BTE curriculum. Tentative findings about the appropriateness of its contents are presented below.

- The ICT tutors (60 percent) judged that the contents were appropriate for helping student-teachers to acquire knowledge of the four operations of the information processing cycle (input, process, output, and storage).
- The tutors (50 percent) also judged that the contents were appropriate for helping student-teachers to demonstrate knowledge on major hardware components of a computer.
- The ICT Tutors (40 percent) judged that the contents were appropriate for equipping student-teachers with knowledge and skills on educational computer software.

- The ICT tutors (50 percent) further judged that the contents were appropriate for curriculum integration.
- As tutors (50 percent) judged that two credit hours were appropriate for the course.
- The ICT tutors (50 percent) also believed the reading list was appropriate for giving sufficient information for studying the course.
- The ICT tutors (40 percent) judged that the contents were inappropriate for equipping student-teachers with skills of using Excel (2003) for organizing and analyzing data.
- The ICT tutors (50 percent) judged that ICT in BTE curriculum was inappropriate in terms of equipping student-teachers with skills to communicate and find relevant information by using the internet.
- The student-teachers judged in focus group discussion that the practical section of this course was not satisfactory probably due to insufficient computers and power outages.
- It can be seen from the two ICT lessons taught by basic school teachers that the teachers demonstrated relevant subject knowledge by using many examples to explain concepts.
- It was also observed that the teaching aids used by the teachers in both lessons did not quite relate to lesson objections.

10.9.1. Modification of ICT Contents

The ICT tutors and the final year student-teachers gave suggestions which include detailed contents on technology integration, contents on professional development training on ICT use.

10.10. Appropriateness of Music and Dance Contents

The tentative findings about the appropriateness contents of Music and Dance are presented below.

10.10.1. First year Music and Dance

- The Music and Dance tutors (60 percent) judged that the contents were appropriate in terms of helping student-teachers to acquire skills of discriminatory listening and observing.
- It was further judged by the Music and Dance tutors (40 percent) that the contents were appropriate for helping student-teachers to appreciate the relationship between different elements of music, dance, and drama.

- The Music and Dance tutors (50 percent) judged that the contents were appropriate in terms of developing creative abilities of student-teachers.
- The Music and Dance tutors (70 percent) judged that the contents were appropriate in terms of helping student-teachers to recognize the role of the performing arts in national development.
- The Music and Dance tutors (60 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge and skills for recognizing different musical instruments and their mode of tone production.
- The Music and Dance tutors (50 percent) judged that the contents were inappropriate in terms of developing competencies and skills in student-teachers for composing simple rhythms and melodies.
- The Music and Dance tutors (40 percent) believed the contents were inappropriate in terms of empowering student-teachers to be able to teach school children how to create movement patterns.
- The Music and Dance tutors (60 percent) judged that one credit hour was inappropriate for the course.
- The Music and Dance tutors (60 percent) further judged that reading list was not sufficient for giving relevant information for studying the course.
- In focus group discussion, the final year student-teachers reacted that the course scarcely provided learning experiences that would allow them to have opportunity to experiment their skills.
- The student-teachers seldom learnt to compose simple rhythms and melodies that were likely to affect their compositions in schools.

10.10.1.1. Modification of First year Music and Dance

The Music and Dance tutors and the final year student-teachers gave suggestions for modification which include detailed contents on composition and performance, increase in credit hours to three and contents on critique and appreciation of music, dance and drama from diverse cultures.

10.10.2. Second year Music and Dance

- It was also judged by the tutors (40 percent) that the contents were appropriate in terms of equipping student-teachers with competencies and skills needed to develop strategies for teaching performing arts in basic schools.

- The Music and Dance tutors (50 percent) further judged that the contents were appropriate in terms of developing competencies in student-teachers for making simple musical instruments for classroom use.
- The Music and Dance tutors (50 percent) judged that the contents were inappropriate in terms of exposing student-teachers to career opportunities in the performing arts.
- The Music and Dance tutors (40 percent) also judged the contents were inappropriate in terms of equipping student-teachers with competencies and skills necessary in organizing and directing creative activities among basic school pupils, and for teaching the Performing Arts: rhythm, pitch, form, dynamics, texture, movement, dance, dance and drama, and career opportunities.
- The Music and Dance tutors (50 percent) judged that one credit hour was inappropriate as per the contents.
- The Music and Dance tutors (70 percent) judged that reading list was inappropriate in terms of giving relevant information for teaching and learning of the course.
- In focus group discussion, the final year student-teachers judged that the practical knowledge gained from this course was not sufficient and may not be useful in outside the classroom.

10.10.2.1. Modification of Second year Music and Dance

The Music and Dance tutors and the final year student-teachers gave suggestions for modification which include; increase in credit hours to three, update of reading list and that project work on performance in music, dance and drama may be included in this course.

10.11. Appropriateness of Ghanaian Language and Culture Contents

The tentative findings about the appropriateness contents of Ghanaian Language and Culture are presented below.

10.11.1. First year Ghanaian Language and Culture

- The Ghanaian Language and Culture tutors (50 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of syntactic structure of the language.
- It was further stated by the Ghanaian Language and Culture tutors (40 percent) that the contents were appropriate in terms of consolidating language usage skills in respective Ghanaian Languages.

- Ghanaian Language and Culture tutors (50 percent) judged that the contents were appropriate for helping the student-teachers to appreciate oral and written literary pieces.
- Ghanaian Language and Culture tutors (40 percent) further indicated the contents were appropriate in terms equipping student-teachers with knowledge for teaching Ghanaian language and Culture.
- Ghanaian Language and Culture Tutors (50 percent) indicated the one credit hour was appropriate in terms of contact hours but tutors (70 percent) also indicated reading list was inappropriate in terms of giving relevant information about the course.
- Observation of lessons taught by the Ghanaian language teachers in basic schools revealed that the teachers were capable of demonstrating knowledge of the subject area and presenting concepts logically and clearly as per the interest of the learner.
- In focus group discussion, the final year student-teachers revealed that the contents of the course ignored the Ghanaian culture in the first year but rather covered on the Ghanaian language usage skills and Ghanaian literature.

10.11.1.1. Modification of First year Ghanaian Language and Culture

The Ghanaian Language and Culture tutors and the final year student-teachers gave suggestions for modification which include; update of reading list and contents on the selected cultural practices and institutions such as puberty rite, naming ceremony and rites associated with pregnancy, birth and death should be included in this course.

10.11.2. Second year Ghanaian Language and Culture

The Ghanaian Language and Culture tutors (50 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of language structure including phonology and grammar.

- The Ghanaian Language and Culture tutors (40 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge of language usage especially on expressions such as proverbs and idioms.
- The Ghanaian Language and Culture tutors (70 percent) revealed that the contents were appropriate in terms of equipping student-teachers with knowledge of writing lesson plans based on the selected topics from the basic school syllabus.
- The Ghanaian Language and Culture tutors (60 percent) judged that the one credit hour was inappropriate as per the contents.

- The Ghanaian Language and Culture tutors (70 percent) judged that reading list was inappropriate in terms of giving relevant information as per the contents.
- In focus group discussion, the final year student-teachers revealed that the Ghanaian language and culture was made an optional course and studied by student-teachers who desired to teach Ghanaian language and culture in basic schools.
- The students revealed that the contents were appropriate of imparting knowledge of Ghanaian culture and practices in student-teachers.
- The students revealed that the literature component of the contents i.e. the novels and poems portraying the Ghanaian ways of life were appropriate for preparing prospective basic school teachers.

10.11.2.1. Modification of second year Ghanaian Language and Culture

The Ghanaian Language and Culture tutors and the final year student-teachers gave suggestions for modification which include; detailed contents on phonology in preparing student-teachers for schools, and differences in the contents in the various Ghanaian languages studied in this curriculum as per the culture and tradition.

10.12. Appropriateness of Physical Education (PE) Contents

The tentative findings about the appropriateness contents of Physical Education (PE) are presented below.

10.12.1. First year Physical Education

- The PE tutors (50 percent) further indicated the contents were appropriate in terms of preparing student-teachers capable for tracing the modern Olympic Games to the ancient Olympic Games. Olympic Games in modern days evolved from the old Olympic Games in Greece.
- The PE tutors (60 percent) judged that the contents were appropriate in terms of preparing student-teachers to understand differences between health related and motor skill aspects of physical fitness.
- The PE tutors (60 percent) judged the contents were appropriate in terms of helping student-teachers to perform basic patterns of physical activity.
- The PE tutors (50 percent) judged that the one credit hour was appropriate as per the content.
- The PE tutors (70 percent) judged that reading list was appropriate in terms of giving relevant information about the course.

- In focus group discussion, the final year student-teachers revealed that training was not given on methodology of teaching the course in the basic schools in first year contents.
- The student-teachers further revealed that the first year PE did not incorporate activities which would allow them to practice their skills

10.12.1.1. Modification of first year PE

The PE tutors and the final year student-teachers gave suggestions for modification which include; establish linkage between theoretical knowledge and practical skills in the contents.

10.12.2. Second year Physical Education

- The PE Tutors (50 percent) judged that the contents were appropriate in terms of equipping student-teachers with knowledge for classification of the human skeleton and joints into types and their functions.
- The PE tutors (80 percent) judged that the contents were appropriate in terms of exposing student-teachers to basic movement skills in soccer, netball, athletics, volleyball, table tennis and gymnastics.
- The PE tutors (50 percent) judged that the contents were appropriate in terms of equipping student-teacher with knowledge and skills for lesson preparation.
- The PE tutors (40 percent) judged that the contents were appropriate in terms of giving student-teachers knowledge of psycho-social and sociological issues like drugs, ergogenic, and locus of control in physical education and sports.
- The PE tutors (50 percent) judged that the contents were appropriate for preparing student-teachers to recognize the location and action of some major muscles in the human body.
- The PE tutors (70 percent) judged that reading list was appropriate in terms of giving relevant information to studying the course.
- The PE tutors (50 percent) judged that one credit hour was inappropriate as per the contents.
- In focus group discussion, the final year student-teachers revealed that the second year PE was elective course but the student-teachers were not interested to opt for it perhaps it was not taught in basic schools.

10.12.2.1. Modification of Second year PE

The PE tutors and the final year student-teachers gave suggestions for modification which include; incorporating comprehensive content on health education in the areas of safety and

accident prevention, physiotherapy and personal hygiene, and creating a balance of contents theory and practical.

11. Section-IV: Modes of Transactions

Here, the modes of transactions BTE curriculum refer to judgement about the methods of teaching in all the courses in the curriculum, judgements of the practice teaching, extra and co-curricular activities, assessment, resources available, general strength of the curriculum, general weakness of the curriculum and suggestions for modification. The tentative findings about the modes of transactions of the BTE curriculum are presented below.

11.1. Methods of teaching the English language in BTE Curriculum

To judge the methods used by the English language tutor in teaching the English language in the BTE curriculum, the English language tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The English language tutors 10 (100 percent) used grammar translation
- The English language tutors 10 (100 percent) used story telling
- The English language tutors 8(80 percent) used discussing
- The English language tutors 9(90 percent) used Brainstorming

Teaching of the English language is primarily to develop speaking, listening, writing and reading skills of the learner. It was thought that the methods used here are appropriate for preparing the student-teachers to acquire the above skills.

11.2. Methods of teaching the Ghanaian Languages and Culture in BTE Curriculum

To judge the methods used by the Ghanaian Languages and Culture tutor in teaching the English language in the BTE curriculum, the Ghanaian Languages and Culture tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The Ghanaian Languages and Culture tutors 10 (100 percent) used grammar translation
- The Ghanaian Languages and Culture tutors 80 (80 percent) used story telling
- The Ghanaian Languages and Culture tutors 10(100 percent) used discussing
- The Ghanaian Languages and Culture tutors 10(100 percent) used Brainstorming

Basically teaching of the Ghanaian Languages and Culture is to develop speaking, listening, writing and reading skills of the learner. It was felt that the methods used by the

subject tutors here are appropriate for preparing the student-teachers to acquire the above skills.

11.3. Methods of teaching Mathematics in BTE Curriculum

To judge the methods used by the Mathematics tutor in teaching the Mathematics in the BTE curriculum, the Mathematics tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The Mathematics tutors 8 (80 percent) used discussing
- The Mathematics tutors 10 (100%) used demonstration
- The Mathematics tutors 8 (80 percent) used collaboration

The methods used by the Mathematics tutors in transacting Mathematics in colleges were perceived by the student-teachers as not interesting and boring. Perhaps it bored the students-teachers because the methods used here are not appropriate.

11.4. Methods of teaching Integrated Science in BTE Curriculum

To judge the methods used by the Integrated Science tutor in teaching the Integrated Science in the BTE curriculum, the Integrated Science tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The Integrated Science tutors 6 (60 percent) used discussing
- The Integrated Science tutors 10 (100 percent) used demonstration
- The Integrated Science tutors 10 (100 percent) used project
- The Integrated Science tutors 5 (50 percent) used brainstorming

Based on the findings, it can be said that the teaching methods used by the tutors here are appropriate for transacting the Integrated Science in the BTE curriculum as per the needs of the student-teachers.

11.5. Methods of teaching Environmental and Social Studies in BTE Curriculum

To judge the methods used by the Environmental and Social Studies (E/SS) tutor in teaching the E/SS in the BTE curriculum, the E/SS tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The E/SS tutors 10 (100 percent) used discussing
- The E/SS tutors 10 (100 percent) used brainstorming
- The E/SS tutors 8 (80 percent) used lecture

It can be seen from the findings presented above that the teaching methods used by the E/SS tutors excludes field trip which is crucial for preparing student-teachers in this course. Therefore, it can be said that the methods used here are inappropriate for transacting the E/SS in the BTE curriculum as per the needs of the student-teachers.

11.6. Methods of teaching Religious and Moral Education (RME) in BTE Curriculum

To judge the methods used by the RME tutor in teaching the RME in the BTE curriculum, the RME tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The RME tutors 10 (100 percent) used lecture
- The RME tutors 10 (100 percent) used brainstorming

It can be seen from the findings presented above that a variety of teaching methods were not used by the RME tutors in preparing the student-teachers. As other teaching methods were probably not most often used, therefore, it can be said that the methods used here are inappropriate for transacting the RME in the BTE curriculum as per the needs of the student-teachers.

11.7. Methods of teaching ICT in BTE Curriculum

To judge the methods used by the ICT tutor in teaching the ICT in the BTE curriculum, the ICT tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The ICT tutors 10 (100 percent) used demonstration
- The ICT tutors 10 (100 percent) used project

It can be seen from the findings presented above that a variety of teaching methods were not used by the ICT tutors in preparing the student-teachers. Perhaps other teachers were used but not most often. Therefore, it can be said that the methods used here are inappropriate for transacting the ICT in the BTE curriculum as per the needs of the student-teachers.

11.8. Methods of teaching Music and Dance in BTE Curriculum

To judge the methods used by the Music and Dance tutor in teaching the Music and Dance in the BTE curriculum, the Music and Dance tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The Music and Dance tutors 10 (100 percent) used demonstration
- The Music and Dance tutors 10 (100 percent) used brainstorming
- The Music and Dance tutors 8 (80 percent) used role play

It can be seen from the findings presented above that appropriate teaching methods were used by the Music and Dance tutors in preparing the student-teachers. Therefore, it can be said that the methods used here are appropriate for transacting the Music and Dance in the BTE curriculum as per the needs of the student-teachers.

11.9. Methods of teaching Pre-Vocational Skills in BTE Curriculum

To judge the methods used by the Pre-Vocational Skills tutor in teaching the Pre-Vocational Skills in the BTE curriculum, the Pre-Vocational Skills tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The Pre-Vocational Skills tutors 10 (100 percent) used demonstration
- The Pre-Vocational Skills tutors 10 (100 percent) used project

It can be seen from the findings presented above that inappropriate teaching methods were used by the Pre-Vocational Skills tutors in preparing the student-teachers. Maybe other teaching methods were seldom used, but it was felt that a variety of them were not most often used by the teachers. Therefore, it can be said that the teaching methods were inappropriate for transacting the Pre-Vocational Skills in the BTE curriculum as per the needs of the student-teachers.

11.10. Methods of teaching HIV/AIDS Education in BTE Curriculum

To judge the methods used by the HIV/AIDS Education tutor in teaching the HIV/AIDS Education in the BTE curriculum, the HIV/AIDS Education tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The HIV/AIDS Education tutors 10 (100 percent) used discussion
- The HIV/AIDS Education tutors 10 (100 percent) used lecture
- The HIV/AIDS Education tutors 10 (100 percent) used brainstorming

It can be seen from the findings presented above that appropriate teaching methods were used by the HIV/AIDS Education tutors in preparing the student-teachers. Maybe other teaching methods were also used, it was therefore felt that these teaching methods were

appropriate for transacting the HIV/AIDS Education in the BTE curriculum as per the needs of the student-teachers.

11.11. Methods of teaching Physical Education (PE) in BTE Curriculum

To judge the methods used by the PE tutor in teaching the PE in the BTE curriculum, the PE tutors were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The PE tutors 10 (100 percent) used demonstration
- The PE tutors 10 (100 percent) used role play
- The PE tutors 10 (100 percent) used collaboration

It can be seen from the findings presented above that appropriate teaching methods were used by the PE tutors in preparing the student-teachers. Probably other teaching methods were also used, it was therefore felt that these teaching methods were appropriate for transacting the PE in the BTE curriculum as per the needs of the student-teachers.

11.12. Methods of teaching EPS in BTE Curriculum

To judge the methods used by the EPS tutor in teaching the EPS in the BTE curriculum, they were requested to rate a five point Likert scale as per the respective methods of teaching the subject in the colleges. It was revealed that most often;

- The EPS tutors 10 (100 percent) used discussion
- The EPS tutors 10 (100 percent) used lecture
- The EPS tutors 6 (60 percent) used demonstration
- The EPS tutors 10(100 percent) used brainstorming

It can be seen from the findings presented above that appropriate teaching methods were used by the EPS tutors in preparing the student-teachers. Therefore, it can be said that these teaching methods are appropriate for transacting the EPS in the BTE curriculum as per the needs of the student-teachers.

11.13. Practice Teaching in BTE Curriculum

To study the mode of transacting practice teaching in BTE curriculum, the tools viz., observation and focus group discussion were used. Tentatively, it was found that the student-teachers had an opportunity to acquire teaching experiences in the classrooms in three stages namely;

1. Lesson observation by the student-teachers in basic schools
2. On-campus teaching practice

3. Out-programme teaching practice

11.13.1. Lesson Observation by the Student-Teachers in Basic Schools

The tentative findings about lesson observation stage are presented below.

- The student-teachers observe a minimum of two lessons taught by basic school teachers in all the school subjects as per lesson plan, classroom management, and teaching methods.
- The observation of lessons in basic schools was conducted by the student-teacher in the first year of the BTE curriculum and reported to their respective colleges.
- Observed lessons were not used to assess the learning progress of the student-teachers, therefore, the student-teachers were not interested to take this observation.

11.13.2. On-Campus Teaching Practice

The tentative findings about the on-campus teaching practice stage are presented below.

- The student-teachers at this stage were required to plan a 45-minute lesson on any topic of choice to teach their peers under the observations of supervisors.
- This section was conducted in the second year of the BTE curriculum and each student-teacher taught a minimum of 2 lessons.
- The supervisor discussed feedbacks and highlighted areas for improvement.
- As there were many student-teachers scheduled to present lessons in one day, many rushed to finish their lessons thereby were not achieving the objectives.
- The on-campus teaching practice was not used to assess the learning progress of the student-teachers.

11.13.3. Out-Programme Teaching Practice

The tentative findings about the Out-programme teaching practice stage are presented below.

- In the third year of the BTE curriculum, the student-teachers go to schools to practice teaching for 16 weeks under the supervision of mentors.
- The student-teachers undertook academic and co-curricular activities in the schools

- In every two weeks, the student-teachers changed classrooms so as to teach in all the basic school classes and subjects.
- Supervisors visited the student-teachers to supervise their lessons and subsequently used the scores for assessment.
- In the entire 16 weeks, the student-teachers taught a minimum of 5 lessons for supervision
- The student-teachers were not taking part in community programmes because this section was overloaded with additional responsibilities such as dissertation writing and preparation for end of year examination.

11.14. Extra-curricular and Co-curricular Activities

The tentative findings about the extra-curricular and co-curricular activities are presented below.

- Majority 133 (95 percent) agreed that provision was made for the student-teachers to engage in extra-curricular and co-curricular activities in the BTE curriculum for all round development.
- The famous extra-curricular and co-curricular activities are; Christian societies, Muslim societies, soccer, volleyball, athletics, quiz competition and students gathering.
- It was revealed in focus group discussion that the sequence of the activities was inappropriate as they were not scheduled and monitored by the time table.

11.15. Assessment of Student-Teachers

The two form of assessment of the student-teachers in BTE curriculum are;

1. Internal assessment
2. External assessment

11.15.1. Internal Assessment

The weightage of tools used in conducting internal assessment is presented below.

- The internal assessment is conducted by the tutors in the colleges
- A written form of assessment (essay and objectives questions) is encouraged here
- A minimum of one written assignment (10 marks)
- A minimum of one mid semester test (20 marks)
- Class attendance (10 marks)

- The student-teachers require a minimum of 55 attendance in a semester
- The student-teachers can take a maximum of 10 leave of absence in a semester

11.15.2.External Assessment

The weightage of tools used in conducting internal assessment is presented below.

- The external assessment is conducted by the UCC, the affiliated university
- Here, a written form of assessment (essay and objectives questions) is encouraged
- End of semester examination (60 marks)
- The student-teachers who has missed 3 lessons in a course, shall be denied to write end of semester examination in that course.
- The durations of the examinations are; 3-hours for 2 credit hour courses and 2-hours for one credit hour courses.
- Finalizes the marks obtained by the student-teachers in dissertations writing
- Finalizes the marks obtained by the student-teachers in out-programme teaching practice.

11.15.3. Suggestions for Modification of Assessment

The following suggestions were given by the experts to improve assessment of learning progress of the student-teachers in BTE colleges;

- Assessment in colleges should be administered by course tutors without interferences from the affiliated university
- Extra and co-curricular activities should be included in the assessment of the student-teachers
- Open viva-voce is essential in assessment of dissertations
- On-campus teaching practice may be included in assessment

11.16. Accessible Teaching and Learning Resources in BTE Colleges

Tentative findings about the extent to which teaching and learning resources are available to facilitate BTE curriculum transaction in the colleges are presented below.

- The experts 95 (68 percent) agreed that course material were available to the student-teachers
- The experts 72 (52 percent) disagreed that the colleges were having equipped libraries

- The experts 93 (66 percent) disagreed that the colleges were having equipped laboratory for science courses
- The experts 74 (53 percent) disagreed that the colleges were having equipped workshops for practical courses
- The experts 63 (74 percent) disagreed that the colleges were having accessible internet facilities.

12. Conclusion

Based on the findings emanated from the present study, an implication can be drawn, that a total overhaul of the BTE curriculum objectives, BTE curriculum contents and modes of transactions may help in producing competent basic school teachers in Ghana.

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