

## **CHAPTER III**

### **PLAN AND PROCEDURE OF THE STUDY**

#### **3.1 Introduction**

This chapter presents a plan and procedure used to collect adequate and valid data to answer the research questions and to achieve the objectives of the study. The details of the plan and procedure that was adopted in this study are presented as follows.

#### **3.2 Design of the Study**

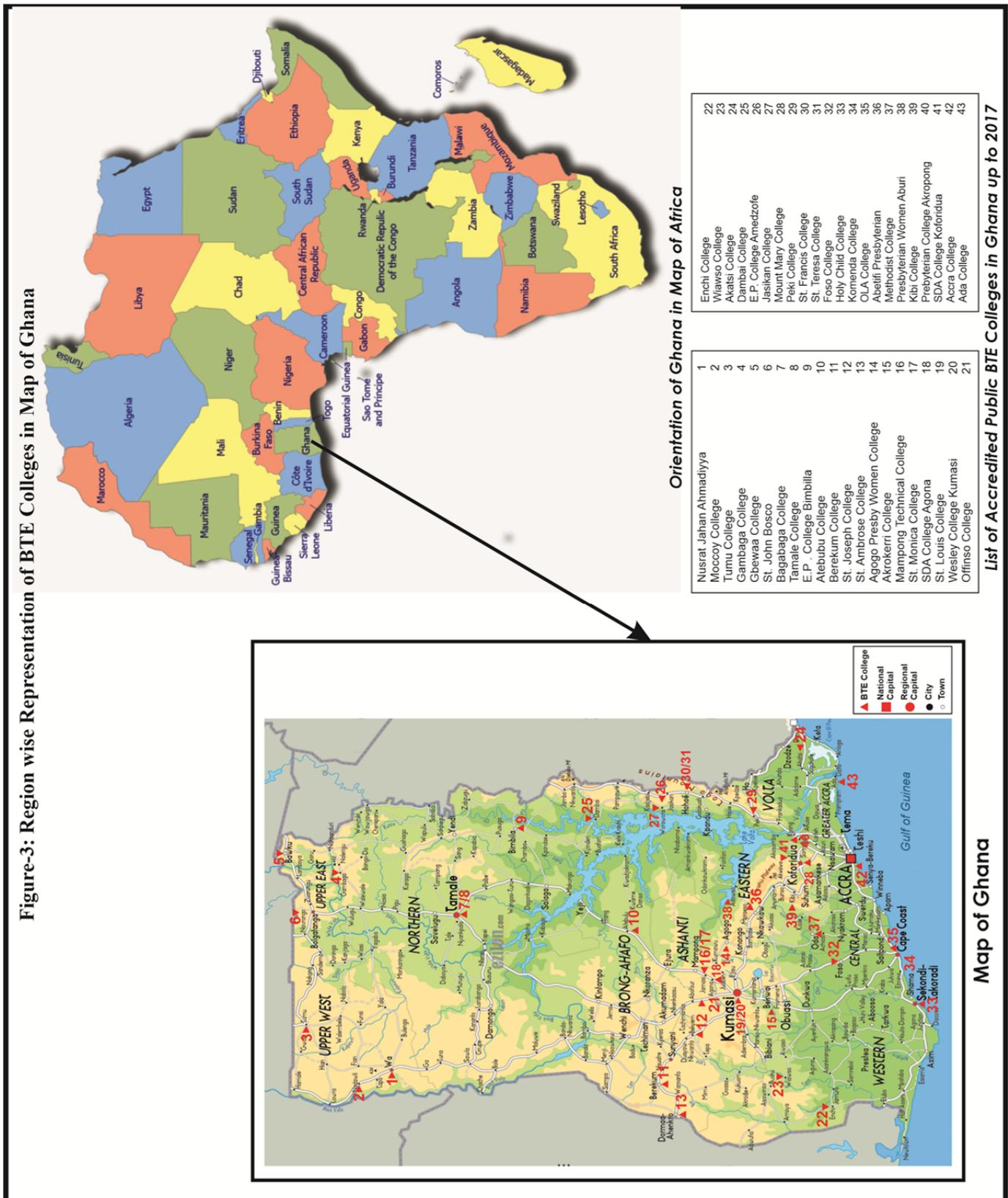
As per the objectives of the study i.e., to judge the relevance of the curriculum objectives, appropriateness of the contents, and mode of transactions, a descriptive survey method was followed. As Creswell, (2012) has cited, some advantages of the descriptive survey are; 1) helps to evaluate programs and 2) provide useful data that be generalized. The details of the design are presented as follows.

##### **3.2.1. The Population of the Study**

To determine the population of this study, a brief discussion about Ghana is essential. Ghana is located in the western part of Africa. It regained political independence from the British in 1957 and currently subject to multi-party democracy for electing presidents and parliamentarians. The population of Ghana as per the 2010 Population and Housing Census was approximately 27 million with agriculture being the main occupation for about sixty per cent of the citizen. They cultivate cereals, tuber crops, and rearing of livestock. But those at the coastal belt fish in the sea and the rivers. The farm products are for consumption purposes but the left-overs are sold to finance children's education. This suggests that most of the Ghanaians are living below the poverty line. For this reason, successive governments have prioritized the BTE colleges to address the needs and aspirations of the people. To motivate teachers at this level, the government pays monthly allowances to student-teachers, offers automatic employment after completion, and places them in schools where their services are needed. So, the demand for BTE has increased in the country over the years. As of the time of conducting this study, there were about 43 public BTE colleges built in all the ten regions of Ghana, which were affiliated with the Institute of Education, the UCC Ghana, and operating on the BTE curriculum that was designed in 2014. Therefore, all the 43 colleges and the BTE curriculum form the

population of the present study. The geographical position of Ghana showing the distribution of the 43 BTE Colleges in region wise, is presented in figure-3.

Figure-3: Region wise Representation of BTE Colleges in Map of Ghana



### **3.3 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. These were regarding the relevance of curriculum objectives, appropriateness of the curriculum contents, and modes of transactions of the curriculum. The relevance of the curriculum objectives is critical for achieving educational goals. In Ghanaian society, where skill-based education is highly anticipated by both education providers and parents, the role of the basic school teachers cannot be underestimated. The BTE curriculum needs to prepare prospective teachers to champion the learning needs of the Ghanaian basic school children. Therefore, the focus of appropriateness of the BTE curriculum is about how the contents of all the courses, extra-curricular activities, out-program and project work are apt for preparing basic school teachers. These components of the BTE curriculum must engage student-teachers consistently and effectively in the dynamic process of acquiring knowledge, teaching skills and professionalism to be effective in the classroom. The details of the needed data are presented below as per the objectives of the study.

#### **3.3.1. Objective-1: Relevance of the BTE Curriculum Objectives**

In the BTE curriculum 2014, there are four objectives and the first task here was to find the relevance of the objectives today for preparing basic school teachers and if any modification is essential. Therefore to study the relevance of the objectives; data needed to be collected was about the judgments and suggestions from the experts (Directors of Education, the Principals of BTE colleges, and BTE tutors) and BTE graduates (alumni).

#### **3.3.2. Objective-II: Appropriateness of the BTE Curriculum Contents**

The BTE curriculum prepares student-teachers in three categories of courses namely; Educational and Contemporary Studies, Curriculum and Pedagogic Studies, and Value Added Courses. To study about the appropriateness of the contents of the courses, experts' judgements about the appropriateness of concepts and suggestions for modifications were needed as data. Also, the lesson taught by 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 the BTE curriculum, 2014 and views of final year student-teachers about the contents were collected to judge the contents.

### **3.3.3 Objective-III: Mode of Transactions of the BTE curriculum**

The modes of transactions of the curriculum are about the methods and approaches of conducting the classes to teach Educational and Contemporary Studies, Curriculum and Pedagogic Studies, and Value Added Courses and the out-going internship program. It involves a plan of activities that student-teachers were engaged in the first two years (in-in programme) in colleges and the out-programme sessions. In this study, data about experts' judgements on the mode of transacting the practice teaching (out programme and on-campus), project works, methods of teaching the various courses, assessment of student-teachers, teaching and learning resources and modifications if any were needed.

### **3.3.4 Objective-IV: Relevance of Extra-Curricular and Co-Curricular Activities**

The relevance of Extra-Curricular and Co-Curricular Activities is about non-academic activities that student-teachers engage in BTE Colleges for their all-round development. It also involves facilities in the BTE colleges that are making it possible for those activities to operate. So, source of data would be the experts' judgments and student-teachers' judgments about the relevance of available Extra-Curricular and Co-Curricular Activities and facilities that are available in the BTE colleges.

## **3.4 Sources of Data**

A variety of sources of data as per the objectives of the study are presented here. The 2014 BTE curriculum document was a primary source of data for this study. The researcher thoroughly studied it to understand the curriculum objectives, curriculum contents and modes of transactions as enshrined in the document. Also, to study the relevance of curriculum objectives, the sources of data were a variety of experts who were involved in BTE curriculum designing and transactions. These were; the Regional Directors of Education, principals of BTE colleges, and tutors of BTE colleges. This personnel were involved in framing and transaction process of the curriculum for the last several years and therefore might have meaningful observations, judgments and suggestions for modification of the BTE curriculum.

To study the appropriateness of the curriculum contents, the sources of data were the tutors of BTE colleges, final year student-teachers and teachers in basic schools who had graduated from the curriculum. Since the tutors were directly involved in the transaction of the courses in classrooms, they may be able to give judgments about the appropriateness of the contents. It was also thought that the final year student-teachers and teachers in basic schools were direct beneficiaries of the curriculum would be in the position to judge the curriculum contents.

Other sources of data to study the appropriateness of the curriculum contents were the Regional Directors of Education, Principals, and tutors of BTE colleges, final year student-teachers and basic schools teachers who had graduated. As the Directors of Education and the Principals of the colleges were performing administrative roles in the transaction process of the curriculum in colleges, they might have gathered rich experiences about the problems and facilities that were provided for the transacting of the BTE curriculum. And they have therefore formed the sources of data for studying the appropriateness of the modes of curriculum transactions. Other sources of data the final year student-teachers of the course because they have been the beneficiaries and probably the best person to judge and opine about the appropriateness of the curriculum transaction and to suggest modification for improvement if any.

### **3.5 Sample for the study**

The BTE curriculum in Ghana is designed by the Institute of Education, UCC 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 is essential for this study. From a practicality point of view, a sample of colleges was selected. To have a representative sample of colleges, it was felt essential to select the colleges administrative region-wise. This is because Ghana is divided into ten administrative regions and each region has some number of BTE colleges affiliated with the Institute of Education, the UCC. One college from each region was selected by using a simple random sampling method. To select the sample, colleges were listed region-wise as presented in figure-3. From the listed colleges of each region, one BTE college from each region was selected by using the lottery method. The list of the sampled colleges region-wise is presented in the table-3.1.

**Table 3.1: Region-Wise Selected BTE Colleges for the Study**

	<b>Region</b>	<b>Number of Colleges</b>	<b>Sampled college</b>	<b>Year Established</b>
1	Upper West	3	Tumu college	1984
2	Upper East	3	St. John Bosco	1946
3	Northern	3	Bagabaga College	1944
4	Brong Ahafo	4	Atebubu College	1965
5	Ashanti Region	8	St. Monica College	1930
6	Volta Region	8	Jasikan College	1952
7	Western Region	2	Enchi College	1965
8	Eastern Region	6	Abetifi Presbyterian	1952
9	Central Region	4	Komenda College	1948
10	Greater Accra	2	Ada College	1965
	<b>Total</b>	<b>43</b>	<b>10</b>	

### 3.6 Brief Overview of the Selected BTE Colleges

To provide a gist about the selected BTE colleges for the study as presented in the table-3.1, it is essential to present a brief overview as follows.

**1. Tumu College of education:** Tumu College of education is a public BTE college located in the northern zone, Tumu, in the Upper East region of Ghana. The college was established in 1984 with the main aim of training competent male and female basic school teachers. The student population is approximately 884 student-teachers (male-543 & female-341), teaching staff of about 27 (male-22 & female-5), and non-teaching staff of about 47 (NCTE, 2017). The college is affiliated to the University of Cape Coast (UCC) and operating on the BTE curriculum leading to the award of Diploma in Basic Education (NCTE, 2017). Also, this college runs courses like Post Diploma in Basic Education, Diploma and Certificate courses in Early Childhood Education on distance mode. And as part of professional development, the college participated in a six-year program called Transforming Teacher Education and Learning (T-TEL). The T-TEL was started in 2014 as the government of Ghana program financed by the UK aid to improve the teaching of Mathematics, English Language, Science and better management of the BTE colleges.

**2. St. John Bosco College of education:** St. John Bosco College of education is a public BTE college located in the northern zone, Navrongo, in the Upper East region of Ghana. The college was established in 1946 by Roman Catholic

Missionaries to train only male (now co-educational) basic school teachers in Ghana. The college is now affiliated to the UCC and operating on the BTE curriculum leading to the award of Diploma in Basic Education (NCTE, 2016). The UCC determines the enrollment procedure of students and regulates the activities of the curriculum to be transacted. The current student strength is about 1277 student-teacher (male-886 & female-388), teaching staff is about 56 (male-49 & female-7) and non-teaching staff of about 57 (male-43 & female-14) as of the time of conducting this study (NCTE, 2017). The college also runs distance and sandwich courses such as Post Diploma in Basic Education, Diploma and Certificate courses in Early Childhood Education and participates actively in the T-TEL program for the professional development of tutors.

- 3. Bagabaga College of education:** Bagabaga College of education was established in 1944 in Tamale, the northern region of Ghana, as a public BTE College financed by the government of Ghana. The college was established to prepare prospective teachers with in-depth academic knowledge and teaching competencies to be effective in the classroom. In this light, it was affiliated to UCC, a reputable teacher education university in Ghana, and operates on its BTE curriculum leading to the award of DBE. According to NCTE (2017), the student strength over the years was about 1261 (male-940 & female-321), the teaching staff was about 53 (male-48 & female-5) and non-teaching staff of about 43 (male-30 & female-13). As one of the oldest colleges in the country, it has offered several certificate courses before the implementation of the BTE curriculum. Also, teachers' preparation courses viz., Bachelor of Education (Basic), Diploma and certificate courses in Early Childhood Education are operating on sandwich and distance mode. As a matter of government policy, tutors and management participate actively in the T-TEL program for professional development.
- 4. Atebubu College of education:** Atebubu College of education was established in October 1965 in Atebubu, Brong Ahafo region of Ghana. It is a public BTE College financed by the government of Ghana to train prospective male and female teachers. The college is accredited by the NAB and operates on the BTE curriculum leading to Diploma in Basic Education under the UCC. As per the NCTE (2017) data, the current number of student-teacher is approximately 1131 (711 male and 420 female) whereas the staff strength consists of 53 teaching staff (male-37 & female-4) and 61 non-teaching staff (male-38 & female-23). Over the

last three decades, the college has offered several certificate teacher education courses before the starting of the DBE. Currently, it is operating on dual-mode thus regular and distance. The regular mode leads to the award of DBE while the distance has courses like Bachelor of Education (Basic), Diploma and Certificate in Early Childhood Education. The college has also distinguished itself extensively in the area of sports. Over the years, its men and women emerged in good positions (first, second, or third) in athletics, football and volleyball at zonal and regional levels sports competition. Its' tutors and management have participated actively in the T-TEL program.

5. **St. Monica College of education:** St. Monica College of education is located at Mampong in the Ashante region of Ghana. It was founded in Cape Coast in 1930 by three missionaries Sisters. These are; Sister Laila, Sister Dorothy and Sister Gertrude to train female prospective teachers. It was subsequently shifted to its current location (Ashante-Mampong) in 1936 based on a request made by the then Ashante King (Ashantehene). It is a public teacher education institution accredited by the NAB, affiliated with the UCC, and operating on its BTE curriculum leading to the award of Diploma in Basic Education. The college is also running Open Distance Learning programs like Bachelor of Education (Basic), Diploma and certificate courses for prospective teachers. According to NCTE (2017), the students' population is about 1343, teaching staff about 41(male-24 & female-17), and non-teaching of about 46 (male-30 & female-16). The tutors and management of this college have also participated in the T-TEL program for professional development.
6. **Jasikan College of education:** Jasikan College of education was established in 1952 in Jasikan, Volta region of Ghana. It was founded as a public college of education financed by the government of Ghana to train male teachers for basic schools. The college has run several certificate courses in education since its establishment. It is currently affiliated with the UCC and operating on the BTE curriculum developed in 2014. According to NCTE (2017), the student strength is about 1069 (male-563 & female-506), teaching staff of about 40 (male-35 & female-5) whereas non-teaching staff is about 60 (male-46 & female-14). Also, another college has been preparing prospective teachers on distance and sandwich modes. Some of the distance courses are Bachelor of Education (Basic), Diploma

and certificate in Early Childhood Education and has been involved in the T-TEL program for professional development.

- 7. Enchi College of education:** Enchi College of education is located at Enchi in the Aowin-Suaman district of Western Region, Ghana. It was established in 1965 by the government of Ghana to prepare professional female basic school teaches. It later became co-educational in 1975 and has been preparing prospective teachers in certificate and Diploma courses in dual modes. The regular modes operate on the BTE curriculum, 2014 leading to the award of Diploma in Basic Education while the distance courses include Bachelor of Education (Basic), Diploma and certificate in Early Childhood Education. The student strength as per the NCTE (2017) is about 970 (male-580 & female-390), teaching staff of about 30 (male-29 & female-1) while non-teaching staff is about 58 (male-49 & female-9). Also, the tutors are involved in the T-TEL program since its inception.
- 8. Abetifi Presbyterian College of education:** Abetifi Presbyterian College of education is located at Abetifi-kwahu in the Kwahu East district of Eastern region, Ghana. It was established in 1952 by the Presbyterian Church to train basic school teachers. Its original site was Techiman in the Brong Ahafo Region and as of 1953, it was called Techiman Teacher Training College-Abetifi. Based on the subsequent decision by the management in 1962, it was shifted to Abetifi and has since retained its name as Abetifi Presbyterian Training College. It was started as single-sex (male) college and later became co-educational in 1977. This college has trained prospective teachers including the virtually impaired teachers in several certificate courses. Currently, it has been absorbed by the government of Ghana, affiliated with the UCC and operating on the BTE curriculum. The data from the NCTE (2017) show that the student strength in this college is about 1160 (male-668 & female-492), teaching staff of about 42 (male-29 & female-13) and non-teaching staff of about 43 (male-27 & female-16) and has also been part of T-TEL program for professional development. Also, there are courses like Bachelor of Education (Basic), Diploma and certificate in Early Childhood Education that are operating here on distance mode to upgrade in-service basic school teachers.
- 9. Komenda College of education:** Komenda College of education is a teacher training institution located at Komenda in the Central region of Ghana. It was established in 1948 as a public training college on the initiative of a regent, A.B. Sam in Komenda. This college is currently operating as co-educational having the

vision to achieve academic excellence and offer service to God and service to mankind. For the past many years, several teachers studied and acquired initial teacher training certificates to teach at the basic schools. It is operating on BTE curriculum leading to the award of DBE under the UCC. Also, in-service basic school teachers have the opportunity to upgrade themselves in this college in courses such as Bachelor of Education (Basic), Diploma and certificate in Early Childhood Education. The NCTE (2017) estimates that students strength in this college is about 1233 (male-772 & female-461), teaching staff of about 49 (male-36 & female-13) and non-teaching staff of about 48 (male-33 & female-15) and has also been involved in T-TEL program for professional development.

**10. Ada College of education:** Ada College of education is a teacher training institution located at Ada-Foah in Ada East District of Greater Accra Region, Ghana. The college was established as a public college in 1965 to produce disciplined and competent basic school teachers in general and technical/vocational education. It has run several modular and certificate courses for the past many years. As of the time of conducting this study, it was operating on the BTE curriculum leading to DBE designed by the UCC in 2014. The students' strength in this college as envisaged by NCTE (2017) is about 917 (male-561 & female-356), teaching staff of about 40 (male-34 & female-6) and non-teaching staff of about 48 (male-18 & female-11). Also, the college runs in-service training courses such as Bachelor of Education (Basic), Diploma and certificate in Early Childhood Education for basic school teacher on distance mode. For the sake of professional development, tutors participated in the T-TEL program.

It can be learnt from the discussion above that the selection of the BTE colleges was based on the ten geographical regions of Ghana. One college was selected from each region to provide data for the present study. It can also be learnt that all the selected colleges were accredited by the NAB, affiliated with the UCC and operating on the BTE curriculum on regular mode. This preceded the selection of experts such as the Regional Directors of Education, principals of BTE colleges and tutors who were Head of Departments of BTE colleges to judge the BTE curriculum as per the objectives of the present study.

To evaluate the relevance of the BTE curriculum objectives (objective-1 of the study), the Regional Directors of Education (10), principals (10) of BTE colleges and 12 Heads of Departments from each sampled BTE colleges i.e, a total of 120 from the BTE colleges were automatically selected as the sample for this study out of the sampled colleges. As it was essential to study the relevance of curriculum from the alumni's perspectives, it was thought to select a sizable number of the graduates who were already in basic schools as teachers for the last three years. To select a sizable number of alumni, the quota sampling method was used to select a sample of 2 alumni from each school that is a total of 26 alumni from basic schools. Two lessons taught by these teachers' were observed in the classrooms to find out their competencies as generalist teachers.

To study the appropriateness of the BTE curriculum contents (Objective-2 of the study), the same set of people as mentioned in the above paragraph were selected. These people include; the Regionals Directors of Education (10), principals (10) of BTE colleges and Head of Departments (120), of BTE colleges and 26 alumni were selected. Also, the stratified sampling method was used to select a sample of final year student-teachers (80) totalling 320 from each of the four main zones of the BTE colleges these zones are northern, western, eastern and central which formed the strata that facilitated the selection of the final year student-teachers for group discussions. In each of the zones, an estimated number of 80 student-teachers were contacted for discussion about the appropriateness of the BTE curriculum contents and modes of transactions.

To study the modes of transactions of the BTE curriculum (Objective-3 of the study), a sample the Regionals Directors of Education (10), principals of BTE colleges (10), and tutors who are Head of Departments of BTE colleges (120), and 26 alumni (2 from each school) from basic schools were selected. Also, the stratified sampling method was used to select a sample of 360 final year student-teachers from the same geographical zones as stated above for group discussion about the modes of transactions.

To study the relevance of the Extra-Curricular activities and Co-Curricular activities (Objective-4 of the study), the same set of people in the above paragraph were considered. The people include; Regionals Directors of Education (10), principals of BTE colleges (10), and tutors who are Head of Departments of BTE colleges (120), and 26 alumni (2 from each school) and 320 student-teachers final year student-

teachers from the four zones (Northern, Western, Eastern and Central) with 80 of them selected from each zone. The details of sampling techniques and the number of the sample selected at a different stage of objectives of the study are presented below in table-3.2, table-3.3 and table-3.4 respectively.

**Table 3.2: Number of Selected Regions and Colleges for the Study**

Regions and Institutions	Total number of Institutions	Sample Selected
Regions	10	10
Number of BTE colleges	43	10
Number of BTE practice schools	43	10

*Note: the institutions were selected based on the number available at the time of Conducting this study (2017)*

**Table 3.3: Sampling Techniques used for Different Objectives of the Study**

Objectives of the study	Population	Sampling method	Sample selected
<b>Objective-1</b>		Random sampling of BTE colleges region-wise	10 BTE colleges
		Purposive sampling of BTE principals, Regional Directors of Education, and quota sampling of tutors who are Heads of Department	BTE principals (10), Heads of Department (120), and Regional Directors (10)
		Quota sampling of alumni from 8 practice schools	26 alumni (2 from each school)
<b>Objective-2</b>	43 BTE Colleges of UCC, Ghana	Cluster sampling of final year student-teachers for group discussion	Group discussions with 320 final year student-teachers from the four zones (80 from each zone). Also, group discussions with 40 final year student-teachers on optional courses (10 from each zone)
		Quota sampling of tutors tutors who are Heads of Department and alumni	Selected sample for objective-1 26 alumni
<b>Objective-3</b>		Purposive sampling of Directors of Education, BTE principals	Selected sample for objective-1 and 2.
<b>Objective-4</b>		Purposive sampling of Directors of Education, BTE principals, Quota sampling of tutors, and Cluster sampling of final year student-teachers	Selected sample for objective-1 and 2.

**Table 3.4: Number of selected Sample for the Study**

<b>Personnel</b>	<b>Approx. Number</b>	<b>Sample Selected</b>
Regional Directors of Education	10	10
Principals of 10 BTE colleges	10	10
Heads of Department who are tutors in 10 BTE colleges	120	120
Alumni in 10 practice schools	80	26
Final year student-teachers in 4 zones	6, 450	320 (40 for optional courses)
<b>Total</b>	<b>6, 670</b>	<b>486</b>

### **3.7 Tools and Techniques used for the Study**

Based on the objectives of the study, data about the relevance of curriculum objectives, curriculum contents, modes of transactions, and suggestions about how the curriculum could be modified were needed for the study. To achieve the objectives, the researcher took the guidance of the guide and developed tools as per the CIPP model to collect the needed data. The tools are as follows;

- i. Questionnaires (open-ended and close-ended) for the Regional Directors of Education, Principals and Heads of Department of the BTE colleges
- ii. Observation of lessons taught by basic school teachers (alumni)
- iii. Group discussion for final year student-teachers
- iv. Documents analysis of 2014 BTE curriculum, Syllabus and lecture notes.

#### **3.7.1 Questionnaire for the Regional Directors of Education and Principals of BTE Colleges**

Based on the objectives of the study, the same type of questionnaire was used to collect needed data from the Regional Directors of Education and Principals of BTE colleges. It was thought that they were at the forefront of BTE Colleges and were involved in curriculum designing, implementation and management. Therefore, 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. To prepare the questionnaire, the researcher referred to the BTE Curriculum Drafted Document, 2014 that was in practice. The questionnaire, therefore, was having open-ended and close-ended questions. The aspects on which the questions were framed alongside the number of items are presented in table-3.5.

**Table 3.5: Weightage of Questions in different Sections of the Questionnaire**

<b>Section</b>	<b>Items</b>	<b>Types of Question</b>	<b>No. of Items</b>
A	Biodata	Close-ended	4
B	The relevance of BTE curriculum objectives	Close-ended & open ended	5
C	Appropriateness of BTE curriculum contents (subject-wise)	Close-ended & open ended	686 Approx.
D	Modes of transactions of BTE curriculum	Close-ended and open-ended	2
E	Practice teaching	Open-ended	4
F	Assessment of student-teachers	Open-ended	8
G	Accessible teaching and learning resources	Close-ended	5
H	Extra-curricular and co-curricular activities	Open-ended	3
I	Suggestions for modification	Open-ended	4
<b>Total</b>			<b>721</b>

### 3.7.1.1. Validation of the Questionnaire

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 15 years of teaching and administrative experience. The experts were two professors from the field of education and three principals of BTE colleges. The experts were presented with a request letter (as enclosed in Appendix-A) explaining the purpose of the research, the BTE curriculum, 2014 for reference including the questionnaire. The experts were requested to judge the contents, and grammar and language clarity of the questions by indicating relevant (√) or irrelevant (x) to each of the items in every section and give suggestions. A pattern (enclosed in Appendix-B), was presented to the experts to facilitate the writing of comments and suggestions. There were eight sections in the questionnaire which are as follows; section-A=biodata, section-B=relevance of curriculum objectives, section-C= appropriateness of the curriculum contents, section-D= modes of transactions, section-E=practice teaching, section-F=assessment of student-teachers and section-G=teaching and learning resources, section-H=extra-curricular and co-curricular activities, and section-I= suggestions. Based on the suggestions given by the experts, the questionnaire was modified.

Judgments of the experts on items of a questionnaire for the Directors of Education and BTE Principals are presented in the table-3.6.

**Table 3.6: Experts' Judgments on Items of Questionnaire for Directors of Education, and BTE Principals**

Section	Item Number	Experts' Judgment					Total	Remarks
		Expert I	Expert II	Expert III	Expert IV	Expert V		
A	1, 2, 3, 4, 5	√	√	√	√	√	5	No modification needed
B	1, 2, 3, 4	√	√	√	√	√	5	No modification needed
C	1	×	√	√	√	√	4	Modification
	2	√	√	√	√	√	5	needed in item 1
D	1	√	×	×	√	√	3	Modification
	2	√	√	√	√	√	5	needed in items 1
E	1	√	×	√	×	√	2	Modification
	2, 3, 4	√	√	√	√	√	5	needed in items 1
F	1, & 3.	×	√	√	×	√	3	Modification
	2, 4, 5, 6, 7, 8	√	√	√	√	√	5	needed in items 1, & 3.
G	1, 2, 3, 4, 5	√	√	√	√	√	5	No modification needed
H	1, 2, 3	√	√	√	√	√	5	No modification needed
I	1, 2, 3, 4	√	√	√	√	√	5	No modification needed

*This symbol (√) refers to relevant, while (×) means irrelevant*

Based on the suggestions given by the experts, the questionnaire was modified. It can be seen from table-3.7 that out of 37 items, 33 were judged by the experts as relevant whereas 4 were modified. This suggests a good sign of the validity of the questionnaire for collecting the needed data. A copy of the finalized questionnaire is presented in Appendix-C.

**Table 3.7: Modified Questionnaire for the Directors of Education and Principals of BTE Colleges**

<b>Section</b>	<b>No Modification Needed</b>	<b>Number of Items Modified</b>	<b>Total</b>
A	5	-	5
B	5	-	5
C	1	1	2
D	1	1	2
E	3	1	4
F	6	2	8
G	5	-	5
H	3	-	3
I	4	-	4
<b>Total</b>	<b>33</b>	<b>4</b>	<b>37</b>

### 3.7.2. 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. The researcher referred to the BTE Curriculum Document, 2014 that is in practice and designed the questionnaire to cover the following aspects; relevance of BTE curriculum objectives, appropriateness of BTE curriculum contents and modes of transactions. The contents aspect of the questionnaire were designed as per the three categories of the BTE courses namely; 1) Curriculum and Pedagogic Studies, 2) Educational and Contemporary Studies and 3) Value Added Courses. As the courses differ in contents, the items about the curriculum contents also differed from one course to the other. In all the courses, the 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 selected experts who validated the questionnaire for the directors of education and college principals. This questionnaire was prepared under the following sections;

- A-Bio-data
- B-Relevance of the curriculum objectives
- C-Appropriateness of the curriculum content (enclosed in Appendix-D)
- D-Modes of transactions of the BTE curriculum

- E-Practice teaching
- F-Assessment of student-teachers
- G-Teaching and learning resources
- H-Co-curricular and Extra-curricular activities
- I-Suggestions

The experts were asked to judge the content coverage of the questionnaire aspect-wise and language clarity of the questions by indicating relevant (√) or irrelevant (x) to each of the items in every section and give suggestions. The questions in Section-B were in subject-wise. For the experts to write their comments and suggestions, a format (enclosed in Appendix-E), was presented to guide them. Based on the suggestions given by the experts, the questionnaire was modified. Judgments of the experts on items of the questionnaire in subject-B (appropriateness of the BTE contents) for the tutors are presented in the next subsection.

### **3.7.3 Validation of Questionnaire relating to Curriculum & Pedagogic Studies Contents**

The courses under Curriculum and Pedagogic Studies include; Mathematics, the English language, Environmental and Social Studies, the Ghanaian language and Culture, Religious and Moral Education (RME), Physical Education and HIV/AIDS Education. To validate the questionnaire about the contents of these courses, the subject masters judged the items on the questionnaires by tick marking items as relevant (√) or irrelevant (×). The details of the validation of a questionnaire related to Curriculum and Pedagogic Studies contents are presented in table-3.8.

**Table 3.8: Experts' Judgments on Items of Questionnaire for the Subject Tutors**

Subject	Item Number	Experts' Judgment					Total	Remarks
		Expert I	Expert II	Expert III	Expert IV	Expert V		
Maths	1, 3, 7, 8, 9, 57,15, 54, 12, 30, 17,	√	√	√	-	√	4	No modification needed in 52 items
	43, 50, 21, 40, 53, 24, 45, 26, 14,	√	√	√	√	√	5	
	29, 21,	√	√	√	√	√	5	
	2, 4, 48, 6, 11, 27, 16, 18, 13, 31,	√	√	√	√	√	5	
	32,	√	-	√	-	-	2	
	33, 34, 35, 36, 37, 38, 39, 22, 41,							
	42, 19, 44, 25, 46, 47, 5, 49, 20,							
	51, 52,							
	23, 10, 55, 56, 14, 58, 59, 60, 61,	×	-	×	×	×	4	
	62, 63, 64, 65, 66, 67, 68, 69, 70,	×	×	×	×	×	5	
71.								
English Language	1, 5, 7, 11, 29, 37, 45, 53, 61, 69,	√	√	√	√	√	5	No modification needed in 62 items
	2, 3, 17, 13, 30, 38, 46, 54, 62, 70,	√	√	√	√	√	5	
	4, 6, 10, 12, 31, 39, 47, 55, 63, 71,	-	-	√	√	√	3	
	8, 14, 15, 21, 32, 40, 48, 56, 64,	√	√	√	√	√	5	
	72, 9, 16, 22, 29, 33, 41, 49, 57,	-	√	√	√	√	4	
	65, 73, 10, 18, 23, 34, 42, 50, 58,	√	√	√	√	√	5	
	66, 74, 20, 25, 26, 35,							
	43, 51, 59, 67, 19, 27, 28, 36, 44,	×	×	×	×	×	5	
	52, 60, 68.	×	×	×	×	-	4	
Env'tal & Social Studies	1, 5, 6,7, 8, 9, 10, 11, 12, 17,18,19,	√	√	√	√	√	5	No modification needed in 40 items
	20, 11, 2, 3, 4, 13, 15, 12, 26, 20,	√	√	√	√	√	5	
	14, 23, 27, 21, 16, 24, 28, 22, 25,	√	√	√	√	√	5	
	29, 30,	√	√	√	√	√	5	
	31, 35, 39, 43, 47, 32, 51, 55, 59,							
	36,							
	40, 44, 48, 52, 56, 60, 63, 33, 37,	×	-	×	-	×	3	
	41, 45, 49, 53, 57, 61, 64, 34, 38,	×	-	×	×	×	4	
	42, 46, 50, 54, 58, 62.	×	×	×	×	×	5	
Integrated Science	1, 84, 14, 7, 8, 9, 57, 94, 113, 71,	-	-	√	√	√	3	No modification needed in 92 items.
	15, 103, 54, 12, 79, 30, 85, 64, 2,	√	√	√	√	-	4	
	114, 17, 43, 50, 13, 103, 21, 40,	√	√	√	√	√	5	
	53, 86, 115, 24, 45, 95, 65, 26,	√	√	√	√	√	5	
	104, 14, 116, 29, 80, 21, 87, 4, 48,	√	√	√	√	√	5	
	6, 117, 96, 11, 105, 27, 66, 16, 18,	√	√	√	√	√	5	
	118, 72, 31, 32, 97, 33, 106. 87,	√	√	√	√	√	5	
	119, 34, 35, 36, 67, 81, 37, 74,	√	√	√	√	√	5	
	107, 89, 38, 120, 98, 39, 22, 41,	√	√	√	√	√	5	
	42, 19, 121, 44, 25, 68, 108, 75,	√	√	√	√	√	5	
82, 90, 122, 76, 46, 47, 109, 5, 49,								
20,								
51, 123, 52, 99, 91, 23, 83, 10, 77,	×	-	×	×	×	4	Modification needed in 32 items	
68, 110, 55, 100, 56, 124, 3, 58,	×	-	×	×	×	4		
111, 92, 59, 60, 61, 78, 62, 63, 70,	×	×	×	×	×	5		
101, 73, 112, 93, 102, 125.	×	×	×	×	×	5		
HIV/AIDS Education	1, 2, 4, 6, 35, 7, 16, 9, 3, 10, 11,	√	√	√	√	√	5	No modification needed in 29 items.
	21, 29, 25, 5, 14, 15, 26, 28, 30,	√	√	√	√	√	5	
	33, 12, 13, 32, 18, 20, 23, 27, 31,	√	√	√	√	-	4	Modification needed in 7 items
	8, 19, 24, 34, 17, 22, 36	×	×	×	×	-	4	

*This symbol (√) refers to relevant, whereas (×) means irrelevant, and not attempted (-)*

It can be seen from table-3.8 that the experts felt some items were irrelevant and ungrammatical. The irrelevant items were marked (×) while the relevant items were marked as (√). Subsequently, the irrelevant items were modified by elimination, reframing, and substitution while the relevant items were retained.

### 3.7.4 Validation of Questionnaire relating to Educational and Contemporary Studies Contents

According to the BTE curriculum 2014, the courses under Educational and Contemporary Studies include; Principles and Practice of Education, Educating Individuals with Special Needs, Principles and Methods of Teaching in Basic School, Trends in Education and School Management, Introduction to Guidance and Counseling, Assessment in basic schools and Research Methodology in Education. These courses formed the various sections upon which the questionnaire was designed. Here, the subject tutors validated the questionnaire about these courses by judging the items as relevant (√) and irrelevant (×). The details of the validation are presented in table-3.9.

**Table 3.9: Experts’ Judgments on Items of Questionnaire for the Tutors of Education & Professional Studies**

Subject	Item Number	Experts’ Judgment					Total	Remark	
		Expert I	Expert II	Expert III	Expert IV	Expert V			
Education and Professional Studies	1, 14, 7, 8, 9, 57, 71, 15,	-	√	√	√	√	4	No modification needed in 65 items.	
	54, 12, 79, 30, 64, 2, 17,	√	√	-	-	-	2		
	43, 50, 13, 21, 40, 53, 24,	√	√	√	√	√	5		
	45, 65, 26, 14, 29, 80,	√	√	√	√	√	5		
	21, 4, 48, 6, 11, 27, 66,	√	√	√	√	√	5		
	16, 18, 72, 31, 32, 33, 34,	√	√	√	√	√	5		
	35, 36, 67, 81, 37, 74, 38,								
	39, 22, 41, 42, 19, 44, 25,								
	68, 75, 82, 76, 46, 47, 5,	×	×	×	×	×	5		Modification needed in 28 items
	49, 20, 51, 52, 23, 83,	×	×	×	×	×	5		
	10, 77, 68, 55, 56, 3, 58,	×	×	×	×	×	5		
	59, 60, 61, 78, 62, 63,	×	-	×	×	-	3		
70, 73.									

*This symbol (√) refers to relevant, while (×) means irrelevant, and not attempted (-)*

It can be seen from the table-3.9 that about 28 items were irrelevant, and ungrammatical while 65 items were relevant. Therefore, a tick mark (×) was provided for irrelevant items while the relevant items were marked as (√). The irrelevant items were modified by elimination, reframing, and substitution while the relevant items were retained.

### **3.7.5 Validation of Questionnaire relating to Value Added Courses Contents**

The courses under Educational and Contemporary Studies include; ICT, Music and Dance, and Pre-Vocational Skills courses (Catering, Creative Arts and Technology, and Home Economics-Sewing). To validate the questionnaire about the contents of these courses, the subject masters judged the items on the questionnaires by tick marking items as relevant (√) or irrelevant (×). The details of the validation of the questionnaire are presented in table-3.10.



It can be seen from the table-3.10 that the experts felt some items were irrelevant and ungrammatical. The irrelevant items were marked mark (×) while the relevant items were marked as (√). The irrelevant items were modified by elimination, reframing, and substitution while the relevant items were retained. And based on the suggestion given by the experts, the questionnaires were modified. The total number of modified items on the contents of the BTE curriculum in subject-wise are presented in table-3.11.

**Table 3.11: Subject-wise Number of Validated Items on the Questionnaires**

<b>Subject</b>	<b>Number of Items Without Modification</b>	<b>Number of Items Modified</b>	<b>Total</b>
Mathematics	52	19	71
English Language	62	12	74
Environmental & Social Studies	40	24	64
Integrated Science	92	32	124
ICT	38	10	48
Pre-Vocational Skills	43	21	64
Music & Dance	37	18	55
Physical Education	37	20	57
HIV/ AIDS Educ.	29	7	36
Educational & Professional Studies	65	28	93
<b>Total</b>	<b>495</b>	<b>191</b>	<b>686</b>

It can be seen from the table-3.11 that out of 686 items, 495 were judged by the experts as relevant whereas 191 were modified. This suggests a good sign of the validity of the questionnaire for collecting the needed data. The copies of the finalized questionnaires are presented in Appendix-D.

### **3.7.6 Observation of Lesson Taught by Basic School Teachers**

The researcher observed lessons taught by basic school teachers who were alumni of the BTE curriculum. Here, a minimum of two lessons taught by each teacher was observed by the researcher as a mute observer. But without a checklist, it was ensured that the following themes were covered in each of the lessons;

1. Lesson plan preparation
2. Presentation
3. Knowledge of the subject matter and pedagogy

4. Classroom management techniques
5. Response from the students
6. Evaluation of learning outcomes

The basic school subjects are; Mathematics, English language, Integrated Science, Social Studies, Prevocational Skills, Religious and Moral Education, Ghanaian language, ICT, and Physical Education. The observation of the lessons in each session lasted between thirty-five to forty-five minutes. And at the end of the lesson, the researcher immediately prepared observation notes to avoid loss of important points. The selected schools and the number of lessons observed are present in table-3.12.

**Table 3.12: Number of Lessons observed in Selected Basic Schools**

Sr. No.	Schools Selected	Subject observed
1	TUTCoE Demonstration JHS	1. English Language 2. Agriculture Science 3. Biology
2	St. John Bosco Demonstration	4. Physics 5. Ghanaian Language (Kasane) 6. Catering
3	Bagabaga Model JHS	7. Mathematics 8. Biology
4	ATECoE Demonstration JHS	9. Ghanaian Language (Twi) 10. Social Studies 11. Creative Art & Technology
5	MONICoE Demonstration JHS	12. ICT 13. RME 14. Sewing
6	Jasikan Demonstration school	15. English Language 16. Agriculture Science 17. ICT
7	Enchicoe Demonstration JHS	18. Catering 19. Chemistry
8	Abeticoe Demonstration JHS	20. Social Studies 21. Physics
9	Komenda Catholic Basic School	22. Mathematics 23. Sewing
10	Ada Foah D/A Basic School	24. RME 25. Creative Art & Technology 26. Chemistry

It can be seen from table-3.12 that a total of 26 lessons were observed. In some schools, three teachers were observed while in other schools two teachers were

observed. This was because some schools were double stream and were having separate teachers for branches of subjects as in Pre-vocational and Integrated Science. So, it was necessary to observe lessons taught by the teachers in the various branches.

### **3.7.7 Group Discussion for Final year Student-Teachers**

To judge the extent to which the BTE curriculum was appropriate in meeting the needs and interest of the student-teachers, the researcher used focus group discussion to collect needed data from final year student-teachers who were on out-program in separate communities in the four zones as discussed above. Here, the researcher was not having a checklist, but it was ensured that the following themes were covered.

- i. The interest of the student-teachers
- ii. Strengths and weaknesses of the various components of the BTE curriculum

To avoid the loss of important points, the researcher prepared notes after the focus group discussion.

### **3.7.8 Documents Analysis**

Based on the objectives of the study, documents that were useful for providing relevant data were reviewed. The documents that were reviewed are presented as follows.

#### **3.7.8.1 The BTE Curriculum Designed by the Institute of Education, UCC 2014**

This document was the primary source of data for this study and was carefully studied to gain insight into the curriculum objectives, the contents of the various courses of the curriculum and the features associated with it.

#### **3.7.8.2 Syllabus and Lecture Notes**

The syllabi and lecture notes that were covered by the tutors per semester were analysed. These documents were analysed based on the themes as presented as follows.

- i. Content adequacy
- ii. Content clarity
- iii. The relevance of the contents for preparing student-teachers

#### **3.7.8.3 BTE Time Table**

The time table is essential for transacting the curriculum in an orderly and systematic manner. Here in this study, the researcher checked the time allotment of the various

courses as per credit hours, and time allotment of extra-curricular and co-curricular activities.

#### **3.7.8.4 Tools for Assessment of Learning Outcomes**

To judge the assessment of learning outcomes of the student-teachers in the BTE colleges, the assessments tools used by tutors to conduct an internal assessment and external assessment were analysed. The analysis of the assessment tools was in lined with the following themes; 1) modalities involved in conducting assessment 2) types of questions, 3) the number of questions, 4) duration and 5) standard of the questions.

### **3.8 Data Collection Procedure**

To collect the needed data, tools viz., questionnaires, observation of lessons, unstructured interview and focus group discussion were used. The procedures adopted for using these tools in collecting the needed data are presented as follows.

#### **3.8.1 Questionnaire for Experts**

The researcher used a questionnaire (open-ended and close-ended) to collect needed data from the experts namely; BTE college principals, BTE tutors who were Head of Department, and Regional Directors of Education. To seek the consent of the respondents, the researcher prepared a letter of request and personally sent to the respondents. Based on the respondents' approval, it was then decided to meet them personally with the questionnaires. They were asked to judge the questionnaires in three sections viz., 1) relevance of the BTE curriculum objectives, 2) appropriateness of BTE curriculum contents and 3) modes of transactions. They were also asked to suggest solutions for modification. All the questionnaires were retrieved after six working days in which most of the items were attempted whereas others were left blank. To fill the blank, some essential data from the principals and tutors of colleges were collected via phone calls and WhatsApp group discussions.

#### **3.8.2 Observation of Lessons taught by Basic School Tutors**

As per the objectives of the study, needed data were collected by using observation of lessons taught by the basic school teachers who are alumni of the BTE curriculum. The researcher visited the practice schools of the selected BTE colleges on permission

to observe the lessons as a mute observer. After, every observation, a note was written in order not to lose the data.

### **3.8.3 Group Discussion for Final year Student-Teachers**

The researcher used group discussion to collect needed data from final year student-teachers. To contact the student-teachers, the researcher visited all the four zones (Northern, Western, Eastern and Central) of the BTE colleges. Each of the zones comprises of final year student-teachers from different colleges who have equally pursued the BTE curriculum and were undertaking out-program teaching practice. It was thought that they were better fit to provide a variety of judgments about the BTE curriculum as per the objectives. Without an interview guide, the researcher probed each group about the BTE curriculum and based on their responses further questions were asked and subsequently asked them to give suggestions for modification of aspect of the curriculum they felt necessary. To avoid the loss of important points the researcher taped recorded the discussion and prepared notes afterwards.

### **3.8.4 The BTE Curriculum Document 2014**

The researcher reviewed The BTE curriculum designed by the Institute of Education, UCC 2014 to understand the essential features upon which the prospective basic school teachers were trained. This document was easily available for perusal at the BTE College where the researcher was working as an administrator. In the same college, other documents such as syllabi and time table were found for review.

## **3.9 Quantification of Data**

To analyse the collected data of the present study, it was necessary to have numerical values. Therefore, some collected data were given codes to facilitate counting (particularly observed lessons) while other data (group discussion) were recorded and presented qualitatively in their raw form.

Data about the relevance of the BTE curriculum objectives were collected from two main sources viz., judgments of experts of the BTE curriculum (Regional Directors of Education, BTE principals and tutors) and lessons taught by the basic school teachers who were alumni of the BTE curriculum. The collected data were discrete based on the count. Therefore, it was essential to adopt frequency and percentages to determine the relevance of the BTE curriculum objectives. For this reason, data collected from the observed lessons were categorized under themes which were subsequently given

unique codes to facilitate counting. The codes are; LP (Lesson plan), P (Presentation), SM (knowledge of subject matter), MT (Classroom Management Technique), Re (Response from student-teachers), EV (Evaluation of learning outcomes). On this basis, frequency and percentages were calculated for each theme by counting the number of codes. The codes used to collect these data are presented in Appendix-A1 & A-2.

Data about the appropriateness of the BTE curriculum contents also involved methods of teaching and assessments of learning outcomes. Here, data were collected from the subject tutors and the final year student-teachers. The subject tutors were presented with questionnaires in subject wise to judge the contents while the final year student-teachers were engaged in group discussion. The collected data from the tutors were counted in frequency and percentages whereas the collected data from student-teachers were presented in raw form as per emerging themes. So, appropriateness of the BTE curriculum contents was determined by juxtaposition of the collected data from the multiple sources.

The data regarding relevance of Co-Curricular and Extra-Curricular activities were recorded in two main components viz., Co-Curricular and Extra-Curricular activities and accessible facilities in BTE colleges. Here, the collected data from tutors were counted and quantified in frequency and percentages while the collected data from the group discussion were presented qualitatively in raw form.

### **3.10 Data Presentation and Analysis**

To achieve the objectives of the study, the collected data were analysed by following the steps presented below.

- a. 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 modes of transactions, and section-III relevance of Co-Curricular and Extra-Curricular activities
  - i. **Section-I:** the collected data were the experts' judgments and the observation of lessons taught by basic schools teachers.
  - ii. **Section-II:** the collected data were the judgments from the experts, final year student-teachers and the observation of lessons taught by the basic school's teachers.

- iii. **Section-III:** the collected data were opinions from the experts, final year student-teachers about the Co-Curricular and Extra-Curricular activities and facilities available in BTE colleges.
- b. Judgments collected through close-ended questions were subjected to descriptive statistical analysis by using frequencies, percentages whereas the open-ended questions, unstructured interview, observations and focus group discussions were presented as per emerging themes. In each of the three sections, suggestions were collected from the respondents for modification of the BTE curriculum.

### **3.11 Ethical Consideration**

The researcher conducted the study without going contrary to ethical issues. To deal with issues of ethics, the consent of the respondents about the study was formally obtained. They were made to decide whether to participate in the study. Also, the anonymity of their names, schools and colleges were devoid in every stage of the study to avoid embarrassment and discomfort of the respondents.

### **3.12 Conclusion**

Here, it can be concluded that this chapter has presented in details, the plan and procedure that was followed in the present study for construction of the tools, selecting of the sample, and of needed data from different sources. Also, the procedure used to analyse the collected data has been presented. In the next chapters i.e., chapter-IV, data analysis and interpretation would be presented followed by findings and discussion in chapter-V, and summary and implications of the study in chapter-VI respectively.