

**UNIVERSITY OF CAPE COAST**

**ASSESSMENT OF THE EFFECTIVENESS OF IN-SERVICE TRAINING  
PROGRAMMES FOR BASIC SCHOOL TEACHERS IN THE ATIWA  
DISTRICT**

**STEPHEN ADU-DARKO**

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TRAINING PROGRAMMES FOR BASIC SCHOOL TEACHERS IN  
THE ATIWA DISTRICT**

***BY***

**STEPHEN ADU-DARKO**

Dissertation submitted to the Institute for Development Studies of the Faculty of Social Sciences, University of Cape Coast, in partial fulfilment of the requirements for award of Master of Arts degree in Human Resource Development

**MAY 2013**

## **DECLARATION**

### **Candidate's Declaration**

I hereby declare that this dissertation is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Name: Stephen Adu-Darko

Signature: ..... Date: .....

### **Supervisor's Declaration**

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's Name: Dr. Koawo Edjah

Signature: ..... Date: .....

## **ABSTRACT**

The study set out to assess the effectiveness of in-service training programmes of the Atiwa District Directorate of Education. A descriptive design was adopted to study 168 teachers who were participants of the teacher training programmes conducted by the Ghana Education Service for teachers in the Atiwa District. Questionnaires were used to collect data from teachers and statistical tools used to analyse the data collected included means, medians, frequencies, and percentages.

The study revealed that there were adequate processes to inform participants of the objectives of the programme and the techniques adopted by the programme design were relevant to the performance needs of the participants. The influence of training programmes on teachers' performance included improvement in teaching styles, classroom delivery, discipline maintenance, assessment methods, and teacher-student relations. Also, the overall performance of teachers was evaluated as improved due to the training programme. The major challenge of the programme had to do with timing.

The study recommended that the Atiwa District Directorate of Education needs to schedule training programmes appropriately and to provide the necessary equipment and materials for the training sessions. Providing further incentives to sustain teacher's interest in the programmes and linking training to direct outcomes, such as promotions were also recommended.

## **ACKNOWLEDGEMENTS**

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## **DEDICATION**

To my parents, Mr Samuel Kwame Adu and Madam Grace Adidi Nyarko,  
both of blessed memory.

## TABLE OF CONTENTS

Content	Page
DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
DEDICATION	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
CHAPTER ONE:INTRODUCTION	1
Background to the study	1
Problem statement	5
Objectives of the study	6
Research questions	6
Significance of the study	7
Scope of the study	7
Organisation of the study	8
CHAPTER TWO:REVIEW OF LITERATURE	9

Introduction	9
The concept of evaluation	9
Methods of assessing training effectiveness	22
Challenges of teacher training programmes	29
Review of empirical literature	31
CHAPTER THREE: METHODOLOGY	35
Introduction	35
Study area	35
Research design	35
Conceptual framework	36
Population	38
Sample size and sampling procedures	39
Sources of data	40
Instruments for data collection	41
Pre-test	41
Ethical issues	42
Fieldwork	43
Field challenges	44
Data management and analysis	44



CHAPTER FOUR:RESULTS AND DISCUSSION	45
Introduction	45
Demographic characteristics of students	45
Research Question 1: How effective are the training processes adopted for the in-service training programmes in the Atiwa District?	49
Research Question 2: What influence do the in-service training programmes have on teachers' performance?	52
Research Question 3: What challenges confront the implementation of in-service training programmes for teachers in the District?	54
Research Question 4: What suggestions can help improve upon the implementation of in-service training programmes in the Atiwa District?	55
CHAPTER FIVE:SUMMARY, CONCLUSIONS AND	
RECOMMENDATIONS	57
Introduction	57
Summary	57
Conclusions	58
Recommendations	59
Limitation of the study	60
Suggestions for further studies	60
REFERENCES	61
APPENDICES	67
A: Questionnaire for trainee teachers	67

## **LIST OF TABLES**

Table	Page
1: Sample selection	40
2: Reliability of subscales	42
3: Sex description of teachers	46
4: Age description of teachers	46
5: Level of education of respondents	47
6: Number of years of teaching	48
7: The effectiveness of the training processes	50
8: Areas improved by training programmes	53
9: Challenges of the training programmes	54
10: Suggestions to improve in-service training programmes	55

## LIST OF FIGURES

Figure	Page
1: Conceptual framework	37

## **CHAPTER ONE**

### **INTRODUCTION**

#### **Background to the study**

The importance of education to personal and national development has been established by various International Development Organisations such as Global Campaign for Education, Agency for Cooperation and Research in Development and United Nations Educational Scientific and Cultural Organisation. United Nations (2009), thus make the achievement of universal basic education by the year 2015 a critical objective of global development agenda. For this reason member countries of the United Nations General Assembly have been tasked to achieve certain objectives on education in their sovereign countries.

These international educational objectives encourage governments to institute measures that will improve enrolment, on the demand side. On the supply side, it is necessary to improve the quality of teaching and educational delivery. This is aimed at improving literacy and the quality of education in member countries of the United Nations General Assembly (Ryan & Cousins, 2009). Many countries have therefore encouraged their respective educational regulatory bodies to undertake programmes aimed at enhancing the delivery of education.

According to United Nations Educational Scientific and Cultural Organisation (UNESCO, 2008), education is a condition for development and the

teacher is the ultimate definer of its reality. The quality of teacher education is critical if education is to enhance development. Teacher preparation, mentoring and motivation are critical factors in enhancing quality education capable of facilitating meaningful development. On the grounds that training programmes can improve the quality of education, which in turn can improve literacy levels, that is towards the achievement of educational objectives, the effectiveness of in-service teacher training programmes must be assessed.

Sanders (1994) subscribes to the concept of evaluation to involve judging the worth of an experience, idea, or process. Macqueen (2002) emphasises that evaluation represents a process of gathering evidence that will form the basis for the most accurate statements possible about particular institutions, strategies, sequences, and styles of educational practice.

From the perspective of the Organisation for Economic Cooperation Development (OECD, 2006), measuring the effectiveness of training programmes connotes a post-assessment of the capabilities of trainees. In another way, it involves the comparison of the abilities of participant trainees and non-participants (control group). By so doing, it can be ascertained whether training intervention objectives have been imparted in participants. Generally it is hypothesized that participant trainees will exhibit better abilities than non-participants.

In assessing the effectiveness of in-service teacher training programmes, (Berk, 2005) establishes twelve strategies which can be employed. These strategies are grouped into direct and indirect evaluation. Self-assessment, student

rating, and peer rating are identified as direct strategies of assessing the effectiveness of teacher training programmes. This is because this group of effectiveness assessment strategies is based on direct observation of the teacher's skills and abilities. Direct assessments can be conducted at the individual level, or through group interviews of students or peers. Direct evaluation of teachers' effectiveness has also been labelled as important for formative decisions. Formative decisions relate to the use of evidence to improve the quality of teaching (Nicol & Macfarlane 2006).

On the other hand indirect evaluation including employer and administrator ratings, scholarships and awards, and exit and alumni ratings can also be employed (Berk, 2005). These strategies are identified as important for summative decisions. Nicol and Macfarlane (2006) elaborate that summative decisions use evidence to sum up the overall performance of teachers to decide about their annual merit pay, promotion, and tenure.

The content of any tool, such as a student or peer rating scale, requires a thorough and explicit definition of the knowledge, skills, and abilities. It should also cover other characteristics and behaviours that describe the job of "effective teaching" (Theall & Franklin 2001). The data from a rating scale or other tool that is based on the systematic collection of opinions or decisions by ratters, observers, or judges hinge on their expertise, qualifications, and experience. Students and peers direct observations of what they see in the classroom form the foundation for their ratings (Berk, 2005).

OECD (2006) asserts that periodic teacher training programmes are mandated by educational policies and guided by assessment standards in many developed countries. In many sub-Saharan African countries, educational policies are inculcating teachers in training programmes. This is mostly done as an effort to fulfil the United Nations Development Programme educational and literacy goal in the Millennium Development Goals. For example, in Namibia, teachers must earn a Basic Education Teaching Diploma in order to teach from first to tenth grade. Teacher training in using modern technology in classrooms is also being instituted by the Namibian Ministry of Education (Boer, 2007).

Teacher training programmes in Ghana is structured to provide a designated three-year pre-service Diploma in Basic Education Programme A is for teachers at the primary level and Basic Education Programme B for teacher at the Junior secondary (Boateng, 2007). Teacher training programmes are provided through pre-service training within the context of training institution programmes, as well as in-service training to improve qualifications, skills, knowledge, and competences of teachers.

The Atiwa District Directorate of Education has been involved in several in-service training workshops for teachers. The purpose of these workshops is generally to improve teaching quality through improving the appropriate and effective teaching skills of teachers for quality educational delivery (Atiwa District Assembly, 2006). The effectiveness of these training programmes need to be assessed to ensure that educational objectives are being duly pursued within the District.

## **Problem statement**

Teachers have been identified as the ultimate definers of the reality of education (UNESCO, 2008). The quality of teaching is therefore an important component of any educational programme, as much as the access to educational facilities is. Teacher in-service training programmes have therefore been encouraged for the purpose of improving the quality of teachers' delivery.

Berk (2005) asserts that determining the effectiveness of teacher training programmes requires the direct or indirect assessment of the effectiveness of the teacher. Several strategies have therefore been promulgated to assess the effectiveness of teachers. The purpose for implementing and assessing teacher training programmes may vary between countries. However, OECD (2006) maintains that it is generally in pursuit of specific educational objectives. It is perceived in some educational circles that ineffectiveness of in-service training for teachers account for poor performance of teachers in education delivery.

In Ghana, pre-service and in-service educational programmes have been mandated by the Ministry of Education (Boateng, 2007). The Atiwa District Directorate of Education (ADDE) has followed suit to institute several in-service training workshops to improve the quality of teaching within the District (Atiwa District Assembly, 2006). The study seeks to examine the effectiveness of these in-service training workshops.



## **Objectives of the study**

The general objective of the study is to determine the effectiveness of in-service training programmes in the Atiwa District. Specifically, the study aims to:

1. Describe the effectiveness of the training processes adopted in the in-service training programmes;
2. Assess the influence of training on teachers' performance;
3. Examine the challenges confronting in-service teacher training programmes in the Atiwa district; and
4. Make suggestions related to improving upon the implementation of in-service teacher training programmes in the Atiwa District.

## **Research questions**

The objectives of the study are augmented by the following research questions:

1. How effective are the training processes adopted for the in-service training programmes in the Atiwa District?
2. What influence do the in-service training programmes have on teachers' performance?
3. What challenges confront the implementation of in-service training programmes for teachers in the District?
4. What suggestions can help improve upon the implementation of in-service training programmes in the Atiwa District?

### **Significance of the study**

The study can provide further insight into the teacher training strategies employed by the Atiwa District Directorate of Education. It can specifically provide additional knowledge to the effectiveness of in-service training programmes for teachers in the Atiwa District. The challenges of the training programmes will be highlighted and the possible strategies for assuaging their detrimental effects can help the planning and design team of in-service teacher training programmes in dealing with such challenges in subsequent training programmes. The effectiveness and the quality of teachers of the Atiwa District can also be provided by the study. In addition, the study can be a point of academic reference for further research on educational evaluation of teachers and training programmes.

### **Scope of the study**

The study was limited to teachers at the basic education level under the Atiwa District Directorate of Education. The study targets only the participant teachers of in-service training workshops in the Junior High Schools. The concepts of the study are limited to those concerning assessment and evaluation of training effectiveness. The assessment of teachers' effectiveness was limited to the perspective of teachers experience with in-service training programmes.

## **Organisation of the study**

The research is divided into five chapters. Chapter One is the introductory chapter and covers the background of the study, problem statement, objectives, research questions, significance of the study, scope, and organisation of the study. Chapter Two deals with the review of literature; theories and concepts which are related to the study. It also presents empirical studies and a conceptual framework for assessing the effectiveness of teacher in-service training programmes in the Atiwa district.

Chapter Three focuses on research methodology. This includes the study area, research design, study population, sample size and sampling procedure, as well as data collection methods and a description of data analysis techniques. It also covers description and administration of the instruments, questionnaire and structured interview guide. Chapter Four focuses on data presentation and analysis. Chapter Five presents the summary of the major findings, conclusions and recommendations.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

#### **Introduction**

This chapter reviews theoretical and conceptual issues related to evaluation of effectiveness of training programmes. Additionally, empirical studies are presented, as well as the lessons learnt from the empirical studies. The chapter follows the following outline:

- The concept of evaluation
- Methods of assessing training effectiveness
- Challenges of teacher in-service training programmes
- Empirical studies
- Conceptual framework

#### **The concept of evaluation**

Goe, Bell and Little (2008) make known that frequently evaluation is referred to as the systematic assessment of the worth or merit of some object. However, there have been concerns that there are many types of evaluations, such as implementation analyses and formative evaluations that do not necessarily result in an assessment of worth or merit (Goe & Croft, 2009). Evaluation may therefore be better described as the systematic acquisition and assessment of

information to provide useful feedback about some object (Rajeev, Madan & Jayarajan , 2009).

Both definitions agree that evaluation is a systematic endeavour and both use the deliberately ambiguous term ‘object’ which could refer to a program, policy, technology, person, need, activity, and so on (Goe, 2008). The latter definition emphasises acquiring and assessing information rather than assessing worth or merit because all evaluation work involves collecting and sifting through data, making judgements about the validity of the information and of inferences we derive from it, whether or not an assessment of worth or merit results.

The concept of evaluation in its comprehensive form could be described as a systematic method for collecting, analysing, and using information to answer questions about projects, policies, and programs particularly about their effectiveness and efficiency (Learning Point Associated, 2010). In both the public and private sectors, stakeholders will want to know if the programs they are funding, implementing, voting for, receiving or objecting to are actually having the intended effect, and answering this question is the job of an evaluator.

The notion of answering questions about efficiency and effectiveness connotes a feedback loop from the evaluator to the posers of the questions, which may include project managers, investors, shareholders, government bodies and institutions, and private sector groups. The channels of feedback therefore provide information on the success and failures of a particular programme (Goe, 2008).

Ryan and Cousins (2009) therefore maintain that the generic goal of most evaluations is to provide useful feedback to a variety of audiences including

sponsors, donors, client-groups, administrators, staff, and other relevant constituencies. Most often, feedback is perceived as useful if it aids in decision-making. But the relationship between an evaluation and its impact is not a simple one. It may fail to influence short-term decisions, and sometimes evaluations that initially seem to have no influence can have a delayed impact when more congenial conditions arise (Learning Point Associates, 2010). Despite this, there is broad consensus that the major goal of evaluation should be to influence decision-making or policy formulation through the provision of empirically-driven feedback.

In a synthesis of the evaluation exercises in various institutions, whether financial, educational, business, or religious and at various levels, whether national, inter-governmental, departmental, or individual, OECD (2006) maintains that a similar purpose that runs across has been to assess either effectiveness or efficiency of particular programmes, projects, training, methods, policies, applications, software and so on. Therefore, the process of evaluation is essentially the process of determining the extent to which programme objectives are actually being realised by programmed activities (Nicol and Macfarlane, 2006). However, since objectives may vary according to the type of programme, for example teacher training may be aimed at improving teachers' skills and affecting improving students' grades, then evaluation is of teacher training programmes would be the process for determining the degree to which these changes in skills and grades are actually taking place (Boer, 2007).

Scheerens, Cees and Thomas (2003) however, declare that evaluation says nothing about what the goals of the programme ought to be. They emphasise that while the outcomes of evaluation may focus on the extent to which goals and expectations of educational programmes are realised, evaluation itself is the process by which one uses to reasonably assess and draw conclusions about the programme.

Evaluation is also seen as neutral to the level at which questions are asked and answers sought. Stufflebearn and Shinkfield (2007) explain that the questions asked do not conform to a particular pattern. At one time evaluation may relate to the assessment of reaction of trainees (teachers in this case), while at another time it may relate to classroom teaching techniques. Furthermore, evaluation is neutral to the time perspective of the questions asked. Evaluation may relate to a particular school day, week, or an entire semester. It may additionally be confined to the life-long effects of one's teaching career.

Kalleghan and Stufflebearn (2003) write that educational evaluations should take some important interrelated concepts into cognisance. These concepts include the evaluations' repeatability and validity. Rossi, Lipsey and Freeman (2004) attest that it is important to ensure that the instruments, such as tests, questionnaires, and interview schedules used in program evaluation are as reliable, valid, and sensitive as possible. This is because a measure that is poorly chosen or poorly conceived can completely undermines the worth of an impact assessment by producing misleading estimates. Only if outcome measures are

valid, reliable and appropriately sensitive can impact assessments be regarded as credible.

#### Reliability in evaluation

Kalleghan and Stufflebearn (2003) elaborate that repeatability reflects in situations where the evaluator or another evaluator can use the same methods of evaluation and obtain the same results as before. Rossi et al. (2004) refer to this as reliability and defines it as the extent to which the measure produces the same results when used repeatedly to measure the same thing. It is hypothesised that the more reliable a measure is, the greater is its statistical power and the more credible its findings. If a measuring instrument is unreliable, it may dilute and obscure the real effects of a program, and the program will appear to be less effective than it actually is. The property of reliability therefore is to generate the same results, using the same methods, irrespective of the evaluator.

#### Validity in evaluation

While reliability focuses on the consistency of the technique to produce the same results, validity centres on the suitability of the technique for the intended purpose (Bamberger, 2000). Potter (2006) adds that the validity of a measurement instrument is the extent to which it measures what it is intended to measure. Validity essentially asks the question, ‘is the technique measuring what it is supposed to measure?’ As an analogy, data on absenteeism would probably be a valid measure of attendance, but its validity as a measure of students’ sense



of responsibility in much more questionable. According to Ryan and Cousins (2009) this concept can be difficult to accurately measure because in general use in evaluations, an instrument may be deemed valid if accepted as valid by the stakeholder, such as funders and program administrators.

#### Sensitivity in evaluation

The principal purpose of the evaluation process is to measure whether the program has an effect on the social problem it seeks to redress; hence, the measurement instrument must be sensitive enough to discern these potential changes (Rossi, Lipsey & Freeman, 2004). A measurement instrument may be insensitive if it contains items measuring outcomes which the program could not possibly affect or if the instrument was originally developed for applications to individuals, for example standardised psychological measures rather than to a group setting. These factors may result in noise which may obscure any effect the program may have had.

#### Process of training evaluation

Program evaluation may be conducted at several stages during a program's lifetime. Each of these stages raises different questions to be answered by the evaluator, and correspondingly different evaluation approaches are needed. Rossi et al. (2004) suggest the five kinds of assessment, which may be appropriate at different stages. The five assessments are the assessment of the need for the program, assessment of program design and logic/theory, assessment of the

program's cost and efficiency, assessment of how the program is being implemented, and assessment of the program's outcome or impact or what it has actually achieved.

#### Assessing needs

A needs assessment examines the population that the program intends to target, to see whether the need as conceptualised in the program actually exists in the population; whether it is, in fact, a problem; and if so, how it might best be dealt with. This includes identifying and diagnosing the actual problem the program is trying to address, who or what is affected by the problem, how widespread the problem is, and what are the measurable effects that are caused by the problem (Louw, 1999).

For teacher training program aimed at improving teaching effectiveness and consequently improving students' performance, a program evaluator may want to find out which techniques, methods, values, attitudes, and practices in teaching that requires to be attended to. Potter (2006) cautions against doing an intervention without properly assessing the need for one. This might result in a great deal of wasted funds if the need did not exist or was misconceived.

#### Assessing the programme theory

The Programme theory developed by Bickman (1987) indicates that there is a logical sequence or consequence of any occurrence. The theory is a logic model of evaluation approach that seeks to describe the sequence of events or

phases of a programme towards the attainment of specific goals. It is a construction of a plausible and sensible model of how a programme is supposed to function. Chen (1990) describes programme theory as a specification of what must be done to achieve the desired goals, what other important impacts may also be anticipated, and how these goals and impacts would be generated.

The Programme theory maintains that effective training programme results from effective inputs such as commitment of stakeholders and appropriate allocation of resources including time, equipment, and finances towards the achievement of the training objectives (Herman, 1997). The theory justifies the intervention in terms of its expected causal effects. In formal terms, a programme theory can be expressed as 'If A, then B'. For example, logically, if teachers are given the appropriate training on making teaching methods effective, then subsequent teaching practices are supposed to be effective. The association can also be expressed as if A then B, and then C. For example, if teachers are given the appropriate training on making teaching methods effective, then subsequent teaching practices are supposed to be effective and then students' performance must improve (Rogers, 2000).

Two distinctive phases can be made in programme theory. On one hand, there is the normative phase, which provides the rationale and justification for the programme structure and activities (Bickman, 1987). On the other hand, there is causative phase, which represents the empirical knowledge about the causal relationship between the intervention and the outcome. These essentially imply the evaluation of the planning phase and the assessment of the implementation

stage respectively. According to Rogers (2000), this allows for the detection of the particular stage of the programme literally malfunctioned.

The programme could have suffered a basic conceptual failure, an implementation failure, or an evaluative failure. At any level of failure, the unilateral or reciprocal logic of the programme, for example training teachers for effectiveness, can be distorted, thus making the objectives of the programme unattainable. The theory has however, been criticised for being over optimistic in its logical functioning and making little reference to values such as participation and dialogue, which are integral components of Kirkpatrick's (1994) theory of training and training effectiveness.

Kirkpatrick (1994) provides a four-tier model for assessing training and effectiveness. It is pointed out that the model does not provide details on how to implement all four levels. Its major purpose is to clarify the meaning of evaluation and offer guidelines on how to get started and proceed. According to the model, evaluation should always begin with level one and move sequentially through the subsequent levels.

The model asserts that Level one represents the initial reaction of the trainee to the training programme (Kirkpatrick, 1994). It represents a measure of participants' initial reactions to a course, usually assessed through questionnaires, surveys, focus groups, and other means of gathering primary data. Rajeev, Madan and Jayarajan (2009) attest that Level one employs attitude questionnaires to measure the trainee's perception of the training programme. This is done after the programme or after each session of the programme. The first to assessing the

training effectiveness in an organisation, such as a bank would therefore be to measure the attitude and perception of trained staff with regards to the training programme.

Level two of the model assess whether the objectives of the programme have been met (Gordon, 1991). It is a measure of skills and knowledge learned, assessed using criterion-referenced tests, pre-tests/post-tests, observation, and interviews. It usually requires a pre-test which is only valid when combined with a post-test. This is to validate the differences between prior knowledge and knowledge gained during the programme. In the absence of a pre-test/post-test, self-assessment tests can be used. However, (Rajeev, Madan & Jayarajan, 2009) assert that self-evaluation tests are less objective than criterion-reference used on pre-tests and post-tests.

The measure of the amount of material learned that participants actually use in everyday work is assessed on Level three, using formal methods, such as testing or informal techniques, such as observations and interviews with co-workers and supervisors. With reference to teacher training programmes, this may also take the form of assessment of teachers' performance by trainers, co-teachers, and proprietors. The intention is to assess whether job performance changes as a result of training (Rajeev et al., 2009).

Kirkpatrick (1994) terms Level 4 as the value to the organisation. Organisational impacts assessed can be in terms of reduced costs, improved quality of work, and increased quantity of work. It measures impacts, which includes monetary efficiency, moral, and teamwork. The value of teacher training

programmes to the educational institution would be the effect the training has on students' performance. According to (Rajeev et al., 2009) collecting, organising, and analysing level-four information can be difficult, time-consuming, and more costly than the other three levels, but the results are often quite worthwhile when viewed in the full context of its value to the organisation.

The programme theory, also called a logic model or impact pathway is an assumption, implicit in the way the program is designed, about how the program's actions are supposed to achieve the outcomes it intends (Bickman, 1987). The logic model is often not stated explicitly by people who run programs, it is simply assumed. An evaluator will need to draw out from the program staff how exactly the program was supposed to achieve its aims and assess whether this logic is plausible. If the logic is not plausible, then the programme was flawed fundamentally and there is the likelihood that the assessment would conclude that the programme objectives were not attained.

Explicating this logic can also reveal unintended or unforeseen consequences of a program, both positive and negative. The program theory drives the hypotheses to test for impact evaluation. Assessing the logic model can also reveal whether there was common understanding amongst program staff and stakeholders about what the program is actually supposed to do and how it is supposed to do it (Larsen, 2001).

### Assessing implementation

Process analysis looks beyond the theory of what the program is supposed to do and instead evaluates how the program is being implemented. This assessment determines whether the components identified as critical to the success of the program were implemented as planned (Goe, 2008). The evaluation determines whether target populations were reached, people received the intended services, and staff was adequately qualified. Process evaluation is an on-going process in which repeated measures may be used to evaluate whether the program was implemented effectively (Ryan & Cousins, 2009).

### Assessing the impact (effectiveness)

The impact assessment determines the causal effects of the program. This involves trying to measure if the program has achieved its intended outcomes. This can involve using sophisticated statistical techniques in order to measure the effect of the program and to find causal relationship between the program and the various outcomes. This is termed by Rossi et al. (2004) as determining causation. This refers to the part of evaluation that determines whether the program itself is causing the changes that are observed in the population it was aimed at. Events or processes outside of the program may be the real cause of the observed outcome or the real prevention of the anticipated outcome.

Hypothetically, students being taught by a teacher under frequent training programmes begin to perform better. This may not be as a result of the training

the teacher receives or its effectiveness, but as a result of the students' efforts to study harder or to employ extra private tutoring after class hours (Potter, 2006).

The isolation of causal factors outside the programme being evaluated is important to determine the real causality. However, the effects of some social phenomena may be difficult to extricate from the programme (Stufflebeam & Shinkfield, 2007). For example, the effects of a bitter divorce on teacher under training and his effectiveness resulting from training may be difficult to extricate.

#### Assessing efficiency

The assessment may also cover cost-benefit or cost-effectiveness analysis of a program. This refers to the process of outlining the benefits and cost of the program for comparison. Generally, an efficient program has a lower cost-benefit ratio (Theall & Franklin, 2001). The challenge is finding a common unit of measurement for both costs and benefits to effect comparison. For example, if the costs of a teacher training programme are stated in currency or monetary units, then the effects, such as improved performance of students must also be stated in monetary terms to enable objective comparison (Theall, Abrami & Mets, 2002). However, it may be a difficult task to quantify improvements in students' performance in currency.



## **Methods of assessing training effectiveness**

The impacts or effectiveness of teacher training programme cannot be assessed in isolation to the teacher or his/her students (Berk, 2005). This is explained as the teacher exhibits progress towards the objectives of the programme through this teaching methods and the consequent change in students' performance. Therefore measuring the teacher's effectiveness after receiving corresponding training will connote measuring the impacts of the training programme.

According to Emery, Kramer and Tian (2003), teacher effectiveness is evaluated for the purpose of making academic decisions. Two types of decisions are identified, namely; formative and summative. Formative decisions involve decisions to improve teaching through the use of evidence to improve and shape the quality of teaching. Summative decisions use evidence to determine the overall performance of teaching in order to make decisions about merit pay, promotion, and tenure.

Evaluating training effectiveness through the assessment of teacher's effectiveness would require the gathering of relevant data and comparing them to a standard. This will also require the identification of data sources and the appropriate techniques or instruments to employ to gather the required data. Knapper and Cranton (2001) establishes that national standards are available in most countries to enable such comparisons. The standards must address what is measured and then how to measure it.

The potential tools to measure teaching effectiveness identified through a synthesis of various literature include student ratings, peer ratings, self-evaluation, videos, student interviews, alumni ratings, employer ratings, administrator ratings, teaching scholarship, teaching awards, learning outcome measures, and teaching portfolios. A unified conceptualisation of teaching effectiveness is proposed to use multiple sources of evidence, such as student ratings, peer ratings, and self-evaluation, to provide an accurate and reliable base for formative and summative decisions.

Multiple sources build on the strengths of all sources, while compensating for the weaknesses in any single source. This triangulation of sources is recommended in view of the complexity of measuring the act of teaching and the variety of direct and indirect sources and tools used to produce the evidence. In Diamond's (2004) analysis, the content of any tool, such as a student or peer rating scale, requires a thorough and explicit definition of the knowledge, skills, and abilities (KSAs), and other characteristics and behaviours that describe the job of effective teaching.

These tools can be grouped into direct and indirect methods. Direct methods are the use of evaluation tools which employ firsthand observation such as students and peers evaluation based on what they observe in the classroom (Fenwick, 2001). Other tools, such as student outcome data and publications on innovative teaching strategies are indirect, from which teaching effectiveness is inferred.

### Student ratings

Historically, student ratings have dominated as the primary measure of teaching effectiveness. According to Emery et al. (2003), it is the most influential measure of performance used in promotion and tenure decisions at institutions that emphasise teaching effectiveness. Students ratings would can be conducted through surveys. This would involve providing rating scales for students on specific teaching concerns, either through a questionnaire or an interview.

Arreola (2000) maintains that there seems to be agreement among the experts on faculty evaluation that student rating provides an excellent source of evidence for both formative and summative decisions. The bottom line however is that student ratings is a necessary source of evidence of teaching effectiveness for both formative and summative decisions, but not a sufficient source for the latter.

### Peer ratings

Peer review as an alternative tool for assessing effectiveness of teacher training. According to Arreola (2000), peer review of teaching is composed of two activities: peer observation of in-class teaching performance and peer review of the written documents used in a course. Peer observation of teaching performance requires a rating scale that covers those aspects of teaching that other teachers are better qualified to evaluate than students. The scale items typically address the instructor's content knowledge, delivery, teaching methods, and learning activities (Berk, Naumann & Appling, 2004). The ratings may be

recorded live with one or more peers on one or multiple occasions or from memory of previous observation.

Peer review of teaching materials requires a different type of scale to rate the quality of the course syllabus, instructional plans, texts, reading assignments, handouts, homework, and tests/projects (Larsen, 2007). Teaching behaviours such as fairness, grading practices, ethics, and professionalism may be included. Ryan and Cousins (2007) lauds this review as less subjective, more cost-effective, efficient, and reliable than peer observations.

Peer observation has been has been labelled as lacking in accuracy of assessment. Goe and Croft (2009) maintains that peer evaluation is blind and subjective. It is explained that observations are biased because the ratings are personal and subjective. Furthermore, peer observation is said to be unreliable as it can yield low inter-reviewer reliability. Learning Point Associates (LPA) (2010) argues that this can be countered by employing more than one observer in the review. The average response to evaluation questions is therefore likely to be more representative.

However, peer observations are the more common choice because they provide direct evaluations of the act of teaching (Larsen, 2001). It is therefore recommended that both forms of peer review should be included in a comprehensive system, where possible.

A synthesis of literature by Stufflebeam and Shinkfield (2007) reveal that peer ratings of teaching performance and materials is the most complementary training effectiveness assessment tool to student ratings. It covers those aspects of

teaching that students are not in a position to evaluate. Student and peer ratings, viewed together, furnish a very comprehensive picture of teaching effectiveness for teaching improvement.

### Self evaluation

Self evaluation represents a self-assessment of the teacher's own performance before and after the training programme. This refers to conducting a self-assessed pre-test and post-test (Carusetta, 2001). It can also be cross-sectional where the teacher assesses himself ideally after the programme, of the particular areas where he perceives to have improved in as a result of the training programme.

Seldin (1999) maintains that there is the propensity that teachers will rate themselves higher than their actual performance, thus providing a distorted effect of the training programme. However, it is argued that self-assessment ratings provide valuable data for triangulation of ratings. When self-evaluation of teaching and training effectiveness is to be used in conjunction with other tools, Miller and Salkind (2002) recommend a structured form to display an instructor's teaching objectives, activities, accomplishments, and failures.

Questions for self-assessment should relate to the objectives of the training programme for example, to improve instructor-student rapport, to improve knowledge of specific disciplines, improve competence in course organisation and planning, and to improve general teaching methods (Wergin, 1992).

The instructor can also complete the student rating scale from two perspectives: as a direct measure of his or her teaching performance and then as the anticipated ratings the students should give. Discrepancies among the triad of students' ratings, instructor's self-ratings and instructor's perceptions of students' ratings can provide valuable insights on teaching effectiveness.

#### Student interviews

'Student interviews' is also identified an important tool which can augment the evaluative results from the rating triad. Bamberger (2000) maintains that, the while student ratings utilise the use of rating questionnaire administered to individual students, student interviews are conducted either individually or for an entire class through focus group discussions. Classroom group interviews involves the entire class, but is conducted by someone other than the instructor. This is to eliminate intimidation by the presence of the instructor. Weiss (1999) asserts that focus group discussions have an advantage over individual questionnaires on the basis that common concerns are easier identified, and a discourse of disagreeing concerns can generate resolution and harmony among diverging views.

#### Administrator ratings

Associate deans, program directors, or department heads can provide a general overview of the effectiveness of training programs. This is typically based on secondary sources, not direct observation of teaching or any other areas of

performance (Diamond, 2004). Typically, a structured activity report is distributed to all faculties to furnish a comprehensive evaluation of achievement in all areas of the teacher's performance related to the objectives of the training programme. The more explicit the categories requested in the report, the easier it is for administrators to evaluate.

#### Learning outcome measures

Most of the preceding tools of assessment involve direct ratings of teaching behaviours. Learning outcome measures is rather indirect. This is an appropriate tool if the training objective was to improve teaching methods for higher student performance. Teaching performance is being inferred from students' performance. Cohen (1981) noted that there are significant correlations between student ratings and performance on final exams. Furthermore, Theall and Franklin (2001) noted consistently high correlations between student ratings of "amount learned" and overall ratings.

Despite these relationships, establishing student performance on learning outcomes as an independent, valid measure of teaching effectiveness is fraught with numerous difficulties (Miller & Salkind, 2002). The crux of the problem is isolating teaching as the sole explanation for student learning. Performance throughout a course on tests, projects, reports, and other indicators may be influenced by the characteristics of the students, the institution, and the outcome measures themselves, over which the training programme have no control (Carusetta, 2001).

Key characteristics of students, such as ability, attitude, motivation, age, gender, and maturation, and of the institution, such as class size, classroom facilities, available technology and learning resources, and school climate, can affect student performance irrespective of what an instructor does in the classroom (Fenwick, 2001). Larsen (2001) recommends that the results of standard outcome measures, such as tests, problem solving exercises, projects, and simulations, be aggregated across groups of students for program evaluation decisions about teaching methods and program improvement. Also, multiple measures can be combined to give meaningful feedback to faculty about patterns in outcomes.

### **Challenges of teacher in-service training programmes**

The programme theory or the logic of teacher training programmes may be feasible to the optimist. However, there are certain challenges that may make objectives of the training unattainable or provide untrue results from the evaluation of the programme. According to Bamberger, Rugh, Church and Fort (2004), these challenges may relate to budget constraints, time constraints, and data constraints.

#### **Budget constraints**

Many programs are faced with budget constraints because most original projects do not include a budget to conduct an evaluation (Bamberger, 2000). Therefore, this automatically results in evaluations of teacher training assessment



programmes being allocated smaller budgets that are inadequate for a rigorous evaluation. Due to the budget constraints it might be difficult to effectively apply the most appropriate methodological instruments. These constraints may consequently affect the time available in which to do the evaluation (Bamberger, 2000). Budget constraints may be addressed by simplifying the evaluation design, revising the sample size, exploring economic data collection methods, such as using volunteers to collect data, shortening surveys, or using focus groups and key informants or looking for reliable secondary data.

#### Time constraints

Time constraint may be significant when the evaluator is not given adequate time to plan the evaluation process. For example, Bracey (2004) suggests a hypothetical situation an evaluator is summoned to conduct an evaluation when the project is already underway. Time constraints are particularly problematic when the evaluator is not familiar with the program being undertaken (Bamberger, 2000). Time constraints can be addressed by the methods listed under budget constraints as above, and also by careful planning to ensure effective data collection and analysis within the limited time space.

#### Data constraints

If the evaluation is initiated late in the program, there may be no baseline data on the conditions of the target group before the intervention began (Bamberger, 2000). Another possible cause of data constraints is the subjectivity

inherent in some data collection tools. The data is likely to be less accurate. Another source of data constraints may result if the for example, peers used in a review know little about the objectives of the programme and how the teacher is to manifest the desired changes.

According to Rossi et al. (2004) data constraints can be addressed by reconstructing baseline data from secondary data or through the use of multiple methods. Multiple methods, such as the combination of qualitative and quantitative data can increase validity through triangulation and save time and money. Additionally, these constraints may be dealt with through careful planning and consultation with program stakeholders. By clearly identifying and understanding client needs ahead of the evaluation, costs and time of the evaluative process can be streamlined and reduced, while still maintaining credibility. Bamberger, (2000) concludes that time, monetary and data constraints can have negative implications on the validity, reliability and transferability of the evaluation.

### **Review of empirical literature**

The study draws on the use of the stated teacher training assessment tools by Abdullah, Samupwa and Alzaidiyeen (2009) to assess training effectiveness in public schools in Namibia. The study involved 43 schools in the Caprivi Region. Within the schools, teachers, students, and administrative units were involved to get the general view of the effectiveness of teacher training programmes. The study conducted the evaluation exercise by recognising the objectives of the

programme and assessing progress towards them through a cross-sectional study involving the major stakeholders of the training programme.

Importantly, the underlying logic of the training programmes were to improving teaching and delivery methods, improving teacher-student interaction, and through that improve overall student performance. The study adopted the four-tier measurement of training effectiveness proposed by Kirkpatrick (1994). The self assessment tests were also employed to measure the teacher's level of knowledge and skills gained. This was employed in the absence of a pre-test/post-test of skills and knowledge gained.

Using quantitative student scores before and after the programme, the study revealed that average performance of students had improved by an average of 9.24 percent after teachers had undergone in-service training. This effect was seen to be lower than expected. It was recognised that this effect included other explanatory variables as students' self-motivation and afterschool tutoring. The study concluded that the logic of the programme was not effectively attained.

The major cause identified had to do with participation of teachers. From teachers' reaction assessment, their training needs were not effectively managed as part of the programme. This reduced morale and participatory involvement in the training programme. Another challenge was with the timing of the programme, which was fixed in between schooling days. The planning of the programme was therefore identified with inherent flaws.

The study recommended the proper planning and execution of the programme by actively involving major stakeholders from the planning to the

evaluation stages. This was seen to be important to improving the effectiveness of teacher training programmes.

#### Lessons learned from empirical studies

Throughout the literature, it has been emphasised that assessing the effectiveness of teacher training programmes connotes a comparison of the teacher's effectiveness before and after the programme. The most appropriate method has been stressed to be a comparison of measures of effectiveness in a pre-test/post-test analysis. However, in the absence of such methods, other tools can be applied in a cross-sectional survey to obtain result of comparative accuracy.

Abdullah et al. (2009) employ a cross-sectional survey to assess the effectiveness of a training programme conducted earlier. It relies heavily on one-point in time individual ratings of changes in teachers' skills, performance, and attitudes toward teaching. Essential lessons to be drawn from the study include the importance of stakeholder participation from the planning through to the implementation and the evaluation stages of the training programme. This is to encourage stakeholders' input as to their actual training needs, the convenience of timing, and to discourage a narrow view on the programme from the perspective of the regulatory body involved in the planning and execution of the programme.

Effectiveness of the programme will be better ascertained if other factors which can possibly lead to the overestimation or underestimation of the programme's effectiveness are controlled for. However, as the study suggests,

there are certain variables that the study cannot control for. The best approach is to try to arbitrarily estimate how much influence those factors have on the outcome of the assessment.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **Introduction**

This chapter deals with the methodological approach used for the study. It discusses the study area, research design, population, sample size, and sampling procedures. The instruments for data collection and data analysis techniques are also discussed in this chapter.

#### **Study area**

Atiwa District is one of the twenty-one districts in the Eastern region. It covers 35 communities which together stretch over an area of about 437.2 square kilometres. The District is endowed with 166 schools made up of private and public primary schools including Kindergartens (96) and Junior High Schools (JHS) (70), and attended by about 1160 teachers. The District Directorate of Education under the auspices of the Director of the Directorate institutes training and monitoring programme for all the schools in the district. These programmes are executed under the supervision of District Training Officer, District Teacher Support Team (D.T.S.T.), Head teachers and Circuit supervisors.

#### **Research design**

A cross-sectional design was adopted, concerning the timeframe for the study and the types of data collected. According to Levin (2006), a cross-sectional

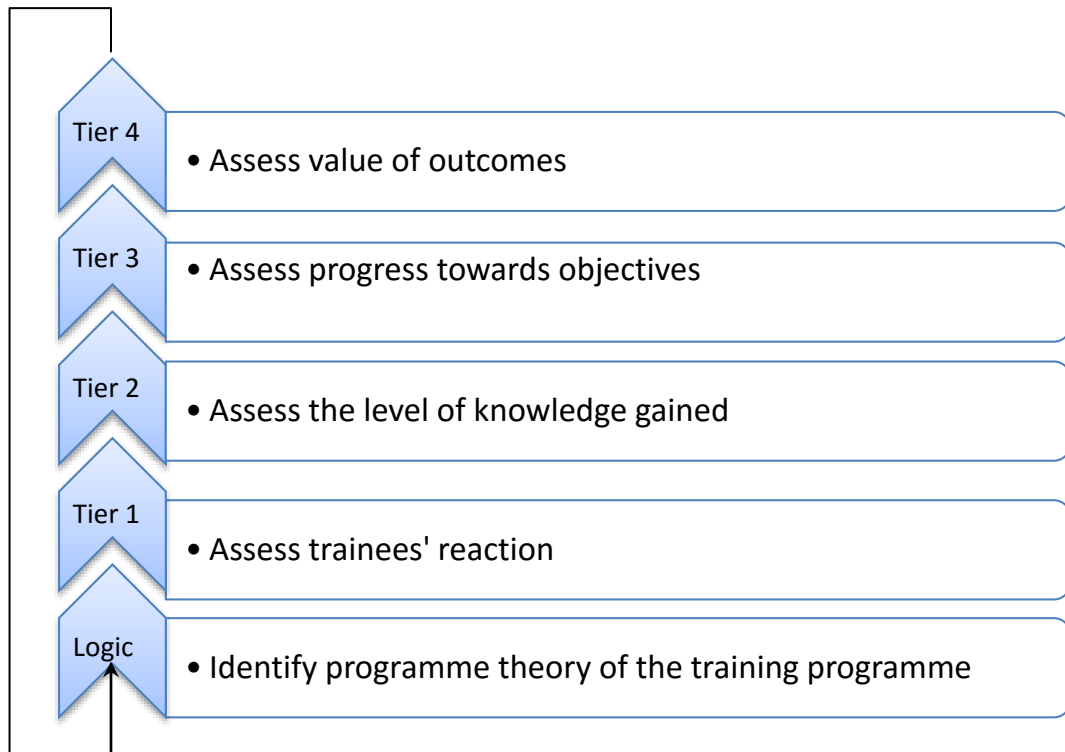
a study is employed for studies covering relatively short periods. It is therefore a quick way to ascertain existing conditions of a particular phenomenon, especially through field surveys. It may however not cover adequate data on previously existing situations and it is not a recommended option for making predictions and introducing interventions. A cross-sectional design was therefore adopted because the study was conducted over a relatively short timeframe.

The study was also descriptive in that it sought to describe the training processes and the evaluative perspectives of participants. According to Amedahe and Gyimah (2003), descriptive study is a vivid presentation of a particular situation. It can be on a large or small scale. Descriptive research aims at describing social systems, relations or social events and providing background information about the issue in question and also to stimulate explanations. A descriptive design is therefore adopted because the study described the characteristics of the training programmes for evaluation.

### **Conceptual framework**

The conceptual framework (Figure 1) suggests that evaluation of the effectiveness of a teaching programme is procedural, moving from a lower level of assessment through higher levels. The Programme Theory and Kirkpatrick's (1994) model for assessing training effectiveness form integral parts of the framework.

The framework suggests that assessing the effectiveness of training programmes begins with stringing the logic embedded in the programme. This is effectively done through the assessment of the objectives of the programme and then creating a logical path from the lower level objectives to the ultimate goal of the programme. The next level is to assess the reaction of teachers to the programme. This will involve determining whether the programme fulfilled the training needs of teachers, whether teachers find the training programme essential, whether teachers presume that the training was properly conducted and so on.



**Figure 1: Conceptual framework for assessing training effectiveness**  
Source: Adapted from Kirkpatrick (1994)

A higher level of assessment will be to assess the level of knowledge gained from the training programme. This will include the use of tests and pre-tests/post-tests, self-evaluation, peer evaluations, or students rating to determine



the changes in teachers work related attitudes, delivery, teaching skills, as it pertains to the objectives of the study. This will essentially involve assessing the progress of the teacher towards objectives of the study. Progress can be deduced from both qualitative assessments, such as students' ratings, peer observation, and self-assessments and quantitative assessments such as written tests.

The overall value to the organisation, in this case is the overall contribution of the teacher's efforts to students' performance, will be determined through administrators review and a synthesis of all ratings, observations, and test scores employed in the evaluation. This not in isolation to the realisation that there are certain uncontrollable factors that can influence evaluation results. The framework recognises that future training needs will develop. As such the framework is presented as a cycle with a feedback loop which informs the logic and execution of future training programmes.

### **Population**

The population for the study comprised Junior High School teachers who took part in the various in-service training programmes organised for the teachers in the district. There were 70 Junior High Schools (J.H.S.) in the Atiwa district. The total number of teachers in the 70 Junior High Schools (J.H.S.) was 420 according to the available statistics from the Atiwa District Education Office.

### **Sample size and sampling procedures**

To ensure adequate representation of the target population and increase sampling precision, 168 teachers (40%) of the total population of the Junior High School (JHS) teachers were used as the sample size. This was based on the assertion made by Ary, Jacob and Razaviana (1990) that for a descriptive sample survey the researcher selects between 10% to 20% of the population as sample to achieve the desired results and also noted that the bigger the sample size the better.

Purposive sampling technique was used to select a total of 42 Junior High Schools (JHS) for the study. Five JHS each were selected from 6 circuits with 10 JHS and below, while 6 JHS were selected from the 2 circuits which have more than 10 JHS. Simple random sampling using the lottery technique was used to select four respondents from each of the 42 JHS to ensure unbiased and equitable selection of the sample size from the schools (Amedahe & Gyimah, 2003).

**Table 1: Sample selection**

S/N	Name of Circuit	Total no. of JHS	Total no. of teachers	No. of selected schools	No. of respondents
1	Abomosu	9	54	5	20
2	Akrofufu	7	42	5	20
3	Akropong	8	48	5	20
4	Anyinam	11	66	6	24
5	Enyiresi	8	48	5	20
6	Kadewaso	8	48	5	20
7	Kwabeng	8	48	5	20
8	Sekyere	11	66	6	24
Total		70	420	42	168

Source: Survey data, 2012

### **Sources of data**

The sources of data for the study were primary and secondary. Primary data on trainees' reaction was solicited from the sampled teachers. Data on the influence of training on teachers' performance was also solicited from participants of the in-service training programmes. Primary data involving the challenges of training programmes. Data on suggestions to improve upon effectiveness of in-service training was obtained from the teachers as well. Secondary data on the list

of Junior High Schools (J. H. S.) and their staff population were obtained through the district education office and school records.

### **Instruments for data collection**

Questionnaires were used to solicit data from teachers. The questionnaire for teachers was sectioned into six sub-divisions. Section One covered demographic data. Section Two solicited data on the teachers' reaction towards training programmes. Section Three was based on the assessment of knowledge gained from training programmes. Section Four was a self-assessment of performance change attributed to the training programme. Section Five was related to the challenges faced by teachers in their involvement in training programmes. Section Six was suggestions to improve upon delivery of in-service training.

### **Pre-test**

The pre-test was done in selected basic schools in the New-Juaben Municipal Directorate of Education, since it also had a similar training programme for teachers. This was done to detect errors in the instrument as well as to determine the reliability and suitability of the items used. The reliability of the questionnaire was also determined using the likert scales. The Cronbach's alpha of these scales was compared to the stipulated alpha at which a set of data responses can be termed as reliable. According to Pallant (2005), a scale is considered reliable when it has a Cronbach's Alpha co-efficient of 0.7 or above.

Table 2 shows the reliability of sub-scales of the instrument for the data collection. The results indicated that all the sub-scales of the instrument had Cronbach's Alpha co-efficient of more than the 0.7 threshold, which meant that the subscale were satisfactorily reliable. The chi-square statistics and their associated p-values also indicated that the reliability of the scales were statistically significant at an alpha of 0.05.

**Table 2: Reliability of subscales**

Scale label	Number of items	Cronbach's Alpha Coefficient	Friedman's Chi-square (p-value)
Evaluation of training processes	22	0.887	419.107(0.000)
Influence of training programme on performance	8	0.836	33.814(0.000)
Challenges of the programme	9	0.888	272.053(0.000)
Suggestions for improvement	7	0.862	322.034(0.000)

n = 168

Source: Survey data, 2012

### **Ethical issues**

The researcher sought a letter of introduction from the Institute for Development Studies, University of Cape Coast. This was sent to the headmasters of all schools which were sampled in order to gain their consent and to acquire permission to conduct the study. This enabled the researcher to gain the needed support or co-operation from the teachers and their Headmasters. The researcher

made sure to explain the purpose of the study to all participants and only gave them the instruments based on their informed consent. The participants were assured of their anonymity unless they exclusively stated that they desired otherwise.

### **Fieldwork**

The fieldwork was conducted from March, 2012 to April, 2012. The self-administered questionnaires were sent to the sampled teachers; they were briefed on the purpose of the study and assured of anonymity and confidentiality and were encouraged to complete the questionnaires. The researcher, having obtained permission from the District Director of Education for the Atiwa district, visited all the 42 selected schools in the eight circuits in the district.

Teachers who had taken part in the in-service training organised by the District Directorate of Education were identified and simple random sampling using the lottery technique was used to select 4 teachers out of the total number of teachers in the school. Explanation was given to the selected teachers on the reason for the study. The researcher administered the instrument personally at each Junior Secondary School to the selected teachers. He was present to answer questions and offer the needed explanation. Sufficient time was allowed for the completion of the questionnaire items after which they were collected. This helped to yield a hundred percent return rate of the questionnaires by the respondents. All the answered questionnaires were collected from the teachers personally by the researcher.

### **Field challenges**

A major challenge was movement through some difficult to reach areas which were only accessible by foot. In some instances some teachers were absent from school even though prior information was given which required the researcher to revisit those schools. Notwithstanding the problems encountered, all the questionnaires distributed were retrieved and used without any adverse effect on the study.

### **Data management and analysis**

The questionnaires collected were coded and subsequently entered into the statistical analysis software called the Statistical Product and Service Solutions (SPSS) Version 16 for the analysis to be done. The data was statistically analysed to make issues clear and to give quick visual impressions on certain issues. Descriptive statistics were mostly used to analyse the data, in the form of percentages and graphs.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **Introduction**

This chapter presents the results and discussion of the study. The first section of the analysis dwelt on the demographic characteristics of respondents, while the subsequent sections focused on answering the research questions.

#### **Demographic characteristics of teachers**

The demographic characteristics of teachers studied were gender, age, and occupational characteristics. These were studied in order to provide a background profile of teachers and to examine the association between the variables and teachers' assessment of training programmes. The distribution of teachers' gender was examined by the study, as shown in Table 3.



**Table 3: Sex description of teachers**

Sex	Number of respondents	percentage
Male	83	49.4
Female	85	50.6
Total	168	100

Source: Survey data, 2012

The results showed that out of the total number of respondents, the study captured more female teachers, 85 (50.6%), who had been participants of training programmes than their male counterparts of 83 (49.4%). There was however, a minimal margin of 2 (1.2%) between the sexes. Views and inferences were therefore equally represented, issues of gender biases were not considered.

**Table 4: Age description of teachers**

Age group	Number of respondents	Percentage
21-30	48	28.6
31-40	60	35.7
41-50	42	25.0
Above 50	18	10.7
Total	168	100

Source: Survey data, 2012

Table 4 shows that the age group of 31-40 had the highest representation of 60 (35.7%) and the least representation were the group above 50 years with 18 (10.7%). Over 150 (89.3%) of respondents had ages between 21 and 50 which shows that majority of the respondents were in their prime years of performance.

**Table 5: Level of education of respondents**

Level	Number of respondents	Percentage
Diploma	117	69.6
Bachelors	40	23.8
Masters	3	1.8
Non-professional	8	4.8
Total	168	100

Source: Survey data, 2012.

Teachers with diploma qualification were the most represented with 117 (69.6%). The level of education with the least representation was masters' level with 3 (1.8%). Cumulatively, 160 (95.2%) of the respondents were professional teachers while just 8 (4.8%) were non-professional teachers. Per the policy of the Ghana Education Service, the minimum requirement of a teacher to teach in the basic school is a Diploma in Basic Education.

**Table 6: Number of years of teaching**

Years of teaching	Number of respondents	Percentage
Below 1 year	19	11.3
1 - 5	51	30.4
6 – 10	48	28.6
11 – 15	32	19.0
Above 15 years	18	10.7
Total	168	100

Source: Survey data, 2012

Table 6 shows that teachers with 1-5 years teaching experience were the largest group with 51 (30.4%). That was followed by the 6-10 years group 48 (28.6%). Teachers who had above 15 years experience being the least represented with 18(10.7%). Newly trained teachers who have barely spent a year on the job were represented by 19 (11.3%).

## **RESEARCH QUESTIONS**

### **Research Question 1: How effective are the training processes adopted for the in-service training programmes in the Atiwa District?**

The evaluation of effectiveness of the training programme necessitated that the training processes be first examined. The processes for training teachers including the organisation, subject matter, suitability and the methodology were examined and evaluated from teachers' perspective as shown on table 7.

**Table 7: The effectiveness of the training processes**

Description of training process	Number of respondents	Percentage
Participants had sufficient prior knowledge of programme objectives	120	71.4
Objectives were relevant to performance needs	154	91.6
Appropriate teaching techniques were used	160	95.2
There was active participation of learners	162	96.4
Average assessment score of participants above 50%	152	90.5
Practical approach was adopted	144	85.7
Theoretical approach was adopted	62	36.9
Adequate stress coping techniques were adopted	118	70.2
Trainers fostered teamwork and had knowledge of course content	125	74.4

Source: Survey data, 2012

The first step towards evaluating the effectiveness of the training programme was to ask teachers to evaluate the ability of the programme to achieve the objectives set. This was in line with Kirkpatrick's Tier 1, reaction stage, of the training evaluation model. According to table 7, the results show that 120 (71.4%) of the sampled teachers indicated that they were given sufficient information on the objectives of the training course before their participation. Similarly, 154 (91.6%) of teachers agreed to the preamble that the objectives of

the training programmes were relevant to their performance needs. This is in line with several studies (Louw, 1999; Ryan and Cousins, 2009; Sanders, 1994) on training programmes that confirm that training is often conducted for skill improvement and to facilitate the efficient and effective execution of employees' job description. One hundred and sixty-two (96.4%) of the sampled teachers indicated that they participated actively in the in the training, this is very significant because it shows the fact that participants had sustained interest in the training programme.

Combinations of theoretical and practical methods of teaching were used. One hundred and forty-four (85.7%) of respondents indicated that practical approach was adopted for the training as against 62 (36.9%) of theoretical approach. The findings confirm several studies (Boer, 2007; Learning Point Associates, 2010; Fenwick, 2001) on teacher training that also identified multiple uses of techniques in the pursuit of training goals. A review of such studies indicates that training hardly conformed to one approach or one technique. Often it is a mix of approaches, both technical and theoretical and also a mix of practical and cognitive techniques for the development of skills and intellectual ability.

**Research Question 2: What influence do the in-service training programmes have on teachers' performance?**

According to the Ghana Education Service INSET sourcebook (2007), the most important purpose of organising in-service training is to improve upon performance of teachers. In relation to this, the study examined the specific ways through which the training programmes improved teachers' performance. Table 8 shows that 162 (96.4%) of the responses confirmed that the instructional planning skills of teachers have been improved through the training programmes. Similarly, 160 (95.2%) of the responses asserted that teachers' teaching methodology and delivery were improved through the training programmes. The study therefore asserted that the aspects of the teachers job that were improved through teacher training programmes included instructional planning skills, teaching methodology and delivery, assessment methods, discipline maintenance, classroom organisation and management and teacher-student relationship. According to Abdullah et al (2009), effective training is accompanied with several desired outcomes, some of which could be the benefits identified by this study.

**Table 8: Areas improved by training programmes**

Areas	Frequency	Percentage
Instructional planning skills	162	96.4
Teacher – student relationship	142	84.5
Discipline maintenance	148	88.0
Assessment methods	156	92.9
Teaching methodology and delivery	160	95.2
Classroom organisation and management	142	84.5

Source: Survey data, 2012

The results thus, confirm studies by Boateng (2007) and Abdullah et al. (2009) that assert that, effective training often results in performance improvement. Boateng (2007) however, asserts that not all improvement in performance of trainees can often be attributed to the training programme alone. On the other hand, there are usually other factors that account for trainees' improvement on their jobs.



**Research Question 3: What challenges confront the implementation of in-service training programmes for teachers in the District?**

The study examined the challenges of the training programmes from the perspective of the respondents through multiple responses.

**Table 9: challenges of the training programmes**

Challenges	Number of respondents	Percentage
Inadequate TLMs	45	26.8
Poor timing	75	44.6
Overloaded content	16	9.5
Boredom	12	7.1
Inadequate breaks	25	14.9
Loss of interest	8	4.8
Inadequate financing	72	42.9

Source: Survey data, 2012

The results, on table 9, show that poor timing 75 (44.6%) was mostly emphasised as challenging to the programme. Some respondents, 72 (42.9%) were of the view that inadequate financing was a challenge to the organisation of the training programmes.

Other challenges identified for the programme included inadequate breaks, boredom, and inadequate teaching and learning materials for the programme. Several other studies (Boer, 2007; Goe and Croft, 2009) confirm similar constraints of training programmes.

**Research Question 4: What suggestions can help improve upon the implementation of in-service training programmes in the Atiwa District?**

Trainees had some suggestions to make in response to the challenges identified from the programme. These suggestions were perceived as the strategies that must be adopted by the programme managers in order to improve the effectiveness of the training programmes. Multiple responses were used to examine suggestions made by teachers to improve training programmes.

**Table 10: Suggestions to improve in-service training programmes**

Suggestions	Number of responses	Percentage
Trainers and trainees must arrive in time	42	25.0
Provide refreshment and feeding	53	31.5
Follow-up monitoring should be improved	40	23.8
Proper time scheduling	38	22.6
Trainees must be given sitting and travelling allowance	38	22.6
There should be use of new technology	45	26.8
Attendance of training programmes must be compulsory	10	6.0

Source: Survey data, 2012

According to Table 10, 42 (25.0%) of the responses suggested that trainees and trainers should arrive on time for the programme sessions. It was suggested by 53 (31.5%) of the responses that refreshment and feeding should be provided. It was also suggested that the time for the programme should be properly scheduled. This was confirmed by 38 (22.6%) of responses. Other responses 10 (6.0%) suggested that attendance to in-service training programmes must be made compulsory.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **Introduction**

This chapter presents the summary of major findings of the study. It also presents the conclusions drawn from the study as well as recommendations derived from the findings of the study.

#### **Summary**

The study set out to assess the effectiveness of in-service training programmes for teachers in the Atiwa District. A descriptive design was adopted to study 168 teachers who were participants of the teacher training programmes conducted by the Ghana Education Service for teachers in the Atiwa District. Questionnaires were used to collect data from teachers and analysed.

#### **Findings**

- There was active participation of learners in the training programmes. Appropriate teaching techniques, both practical and theoretical approaches were adopted for the training programmes.
- In-service training programmes had positive influence on teachers performance through improvement in instructional planning skills, assessment methods, classroom organisation and management as well as teaching methodology and delivery.

- Challenges confronting the implementation of in-service training programmes were inadequate financing, poor timing, overloaded content and inadequate teaching / learning materials (TLMs).
- Suggestions to improve upon in-service training programmes include proper time scheduling, timely arrival of trainers and participants, provision of adequate refreshment and feeding and the need to improve follow-up monitoring.

## **Conclusions**

The study makes the following conclusions based on the major findings. In describing the effectiveness of the in-service training processes, the study concludes that learners participated actively in the in-service training programmes in the Atiwa district. Also, the techniques adopted by the programme designers were relevant to the performance needs of the participants.

The influence of training programmes on teachers' performance included improvement in instructional planning skills, teaching methodology and delivery, discipline maintenance, assessment methods, classroom organisation and management and teacher-student relations.

The major challenge of the programme had to do with timing however, other challenges including inadequate teaching and learning materials to support the programme, inadequate financing and overload of the course contents were also identified.

In order to overcome these challenges and to improve upon effectiveness of such programmes, teachers suggested that the trainers and trainees should arrived on time for training sessions, participants should be fed and provided with travel allowance. There should be follow-up monitoring, and the application of modern technology in lesson delivery should also be enhanced. Overall the study concludes that the teacher training programmes of Atiwa District is effective in two major areas; first, in the achievement of training objectives, and second in improving the performance of teachers.

### **Recommendations**

The following recommendations are made in response to the findings and conclusions of the study. The study recommends that the Ghana Education Service to provide:

1. a more appropriate schedule for training programmes of teachers. For example, the programme can be conducted during the vacation periods. This can guard against clashes that occur between training sessions and classroom work for teachers.
2. the necessary equipment and materials for the training sessions in order to enhance the effectiveness of the programme.
3. further incentives that can sustain teachers' interests in the programme. For example, teachers can be given some allowances in form of transportation subsidies and subsidies for feeding costs as a motivational tool to encourage participation.

4. some direct benefits of the training such as aligning performance after training to promotions. This can encourage performance during and after the training programme.

### **Limitations of the study**

There were some limitations regarding accessing secondary data, especially on performance records of training participants, as those records had not been properly managed by the programme organisers. The research focused on teachers only and could not cover the perspective of students who were being taught by these teachers.

### **Suggestions for further studies**

The study suggests that the research could be replicated in other districts outside the study area since my study could not cover the entire region or country. Studies can be conducted in the area of finding the extent to which students' performance has been affected as a result of in-service training programmes for teachers. Other studies can be conducted in the area of identifying reliable source of funding training programmes, such that the necessary supporting equipment can be provided for effective training.

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## **APPENDICES**

### **APPENDIX A**

#### **QUESTIONNAIRE FOR TRAINEE TEACHERS**

Dear respondent,

I am an M.A Human Resource Development student from the Institute for Development Studies (UCC). This is an academic study dubbed: Assessing the effectiveness of teacher in-service training programmes in Atiwa District. The quest for information is principally for academic purposes. Responses provided shall be treated confidentially and uniquely for the stated purpose. Please be candid in expressing your opinions closest to the way you feel about an issue.

#### **Section A: Demographic data**

1. Sex
2. Age
3. What is your professional qualification?
4. How long have you been employed in the teaching service?
5. Course(s) taught
6. Average number of periods taught per week
7. Average class size
8. Other occupations if any

**Section B: Evaluation of training processes**

9. What motivated you to participate?
  - a. It was compulsory
  - b. I needed to better my teaching skills
  - c. I was curious
  - d. Other colleagues who had been trained on such programme were performing better
  - e. Other specify

10. What were the objectives of the programme?

11.

<b>Evaluation of training objectives</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
1. I was given sufficient information on the objectives of the training course before my arrival.				
2. The objectives of the course were achieved				
3. The objectives addressed the essential performance needs				

12. What approach did the training conform to?

- a. Theoretical reasoning,
- b. Practical knowledge,
- c. Verbal training (Eloquence and diction)

13. Which of the following techniques were used in the training programme?

Lectures

Discussions

Audio/Visual aids

Demonstrations

Role play

Others specify

14. How did the techniques (in 13 above) help to foster your understanding in the training process?

15. To what extent do you agree that the techniques adopted in the training were relevant to the needs of teachers? Use SA, A, D, SD

a. Lectures

b. Discussions

c. Audio/Visual aids

d. Demonstrations

f. Role play

g. Others specify



16. To what extent do you agree that stress coping exercises and psychological support were adequately given? SA = Strongly Agree; A = Agree; D = Disagree; SD = Strongly Disagree

17.

<b>Trainers characteristics</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
1. Fostered teamwork				
2. Adequate knowledge of course content				
3. Fairness in assessment and relations				
4. Appropriate delivery skills				

18. How were trainees assessed? Tick all that apply

a. Written tests..... What was your average percentage score?.....

b. Verbal tests..... What was your average percentage score?.....

c. Practical assignments..... What was your average percentage score?.....

**C: Influence of training of job performance**

19. Which aspects of your job do you think the training programmes might have helped improve? Tick all that apply

- a. Teaching style
- b. Classroom socialisation
- c. Discipline maintenance
- d. Assessment methods
- e. Teacher-student relationship
- f. Other specify

20. Which other specific areas do you think the training might have helped improved?

21. To what extent would you agree that you are performing better than colleagues who have not been engaged in such a programme?

- a. Strongly agree
- b. Fairly agree
- c. Fairly disagree
- d. Strongly disagree

#### **Section D: Challenges of training programme**

22. Briefly describe how the following pose challenges to your participation in training programmes:

- i. Content of programme
- ii. Relationship with trainer
- iii. Inadequate TLMs
- iv. Communication to trainers
- v. Inadequate breaks
- vi. Duration of training sessions
- vii. Poor timing
- viii. Loss of interest
- ix. Boredom

#### **Section E: suggestions to improve upon in-service training**

23. Please suggest ways to improve the organisation of in-service training in the district.( tick all that apply)

- a. Participation in in-service training should be compulsory.
- b. There should be the use of new technology in lesson presentation.

- c. Trainers and trainees must arrive on time.
- d. Provide refreshment and feeding.
- e. Trainees must be given sitting and travel allowances.
- f. Proper time scheduling.
- g. Follow-up monitoring should be improved.
- h. Others ( specify)

**THANK YOU FOR YOUR COOPERATION**