

UNIVERSITY OF CAPE COAST

THE PERCEIVED WASHBACK EFFECTS OF HIGH-STAKES TEST ON
TEACHING AND LEARNING OF BUSINESS COURSES IN SENIOR
HIGH SCHOOLS IN EASTERN REGION OF GHANA

AIKINS ANIM

2020

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HIGH SCHOOLS IN EASTERN REGION OF GHANA

BY

AIKINS ANIM

Thesis submitted to the Department of Education and Psychology of the
Faculty of Educational Foundations, College of Education Studies, University
of Cape Coast, in partial fulfilment of the requirement for the award of Master
of Philosophy degree in Educational Measurement and Evaluation

MAY 2020

DECLARATION

Candidate's Declaration

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

Candidate's Signature..... Date.....

Name:

Supervisor's Declaration

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

Principal Supervisor's Signature: Date.....

Name:

Co- Supervisor's Signature: Date.....

Name:

ABSTRACT

The study sought to examine the perceived washback effects of High-stakes test on teaching and learning in the eastern region of Ghana. The descriptive survey design was adopted for the study. Purposive and disproportionate stratified sampling techniques were adopted for the study. A total of 218 business teachers and 380 business students were used for the study. A 44-item Questionnaire and 30-item questionnaire were used to collect data from teachers and students respectively. Frequencies, percentages, means, standard deviations and MANOVA were the statistical tools used for the analysis. Findings from the study revealed both teachers and students held negative perception of WASSCE. Again, the study found out that test preparation activities have dominated teachers' classroom practices. It was also identified that teachers and students relied on test-oriented materials and commercially produced textbooks flooded with WASSCE past questions. Again, the study found out that WASSCE had encouraged teachers to teach more and also, being innovative in the classroom. Again, the study revealed there was no statistically significant difference in the washback effects of WASSCE among SHS1, SHS2 and SHS 3 students. It was concluded that WASSCE as a high-stakes test influences teaching and learning intended and unintended at the senior high school. It was therefore recommended that WAEC should consider other forms of testing to promote positive or beneficial washback effect on teaching and learning. Also, Ghana Education Service and heads of institutions should provide in-service and staff development trainings for teachers on the effect on accountability pressure to minimise the pressure on teachers to increase test scores which may lead to narrowing the curriculum.

KEY WORDS

High-stakes test

Washback

Teachers

Perception

Classroom Activities

Assessment

Testing

WASSCE

Perceived

ACKNOWLEDGEMENTS

My profound gratitude goes particularly to my principal supervisor Dr. Eric Anane, for his support, patience and suggestions throughout the study of which my academic journey has been enlightened. I am able to come this far through your wealth of knowledge, experience and enthusiasm to help. Dr. I am grateful to you. I am greatly indebted to Dr. Kenneth Asamoah-Gyimah, my co-supervisor, for his expert advice and suggestions during this research work.

My appreciation also extends to my father Kwasi Ankomah and my mother Stella Asabea for their help and encouragement in various ways. My last appreciation goes to all the headteachers, teachers and students in the Eastern region for accepting to participate in the study.

DEDICATION

To my parents: Ankomah and Stella

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CHAPTER ONE

INTRODUCTION

Background to the Study

A sixteenth century Protestant German teacher, Philip Melancthon, once made the following observation: “No academic exercise can be more useful than that of examination. It whets the desire for learning; it enhances the solicitude of study while it animates the attention to whatever is taught” Agbeti (as cited in Madaus, 2013). This reflection reveals what has been known since that time about the power of assessment to influence students’ learning. However, this is only a partial look of the effects of assessment on education. It is of this view that, Havnes (2004) asserted, it is acknowledged that assessment does not impact only learning but also teaching, textbooks and indeed the whole educational system. It is also clear from the reflection that assessment has been a part of education for centuries, and it is difficult now to imagine an educational system without it.

Assessment infuses all learning activities in schools today and it facilitates the teaching and learning in the classroom (Dunn & Mulvenon, 2009). Educational assessment ranges from informal activities such as teacher observations and questions during lessons through class tests to formal external examinations (Gipps, 2011). Assessment of learners has conveniently been categorised as formative or summative depending on how the results are used (Dunn & Mulvenon, 2009). Formative assessment provides feedback to the teacher in the course of teaching to enable him or her judge the

effectiveness of a lesson, to make instructional decisions, to determine an appropriate remedial action where necessary and to motivate students (Black & Wiliam, 2012). This type of assessment is a tool in the hands of the teacher and is embedded in the teaching and learning process. For this reason, it is now appropriately referred to as assessment *for* learning.

Summative assessment, on the hand, usually takes place at the end of program or a course to ascertain how students are performing or doing on a program or a course (Black & Wiliam, 2012). Usually, summative assessment also known as the assessment of learning takes the form of external examination. Between the two categories of assessment, it is perhaps assessment for summative use that has generated more controversies regarding its role in education. Over time, its role has been expanded from being a mere measure of students' learning to an instrument for promoting curriculum change.

Advocates of the use of external assessment believe that it can be used to modify teaching in required ways if it is used to pressurise teachers to improve students' learning (Popham, 2005; Resnick & Resnick, 2009). Opponents on their part point to the harmful effects external assessment tends to have on learning which they claim outweigh any benefits. They claim the negative effects are not limited to the cognitive domain but extend to sociological issues relating to power, social class and race relations and equal opportunities in a subtle manner (Amrein & Berliner, 2002; Broadfoot & Pollard, 2000; Gipps, 2011). It is of this same claim that the Anamuah-Mensah Committee report, (2002) asserted "it is recognised that the type of assessment employed by the system dictate the type of pedagogy used by teachers" and

which the committee is strongly advocating that this system of assessment should be scrapped off.

In the Ghanaian context, pre-university cycles of education (i.e. basic and senior high school levels) take Basic Education Certificate Examination and West African Senior School Certificate Examinations respectively as external high-stakes examinations that are originated and moderated by agencies outside the classroom. Assessments of this nature take the form of high-stakes examinations which carry consequences for the students, their teachers or schools (Anamuah-Mensah Committee report, 2002, Agbeti, 2014; Anane, 2010; Amoako, 2018).

In Ghana, much importance has been attached to high-stakes testing by teachers, students, parents and other stakeholders due to the diverse roles played by this examination (Anane, 2010). The role played by high-stake examinations includes determining the quality of teaching and learning in schools, also in determining the future prospects of students (Heubert, 2000).

High-stakes testing has been described as standardised examination which much importance is attached to it by schools and students because of its consequences (Smyth, Banks & Calvert, 2012). Heubert (2000) defined high-stake test as an assessment which are of importance in making decisions regarding students, teachers and the school as whole. High-stakes external assessment is a type that is used for grading, selection, and certification and for accountability (Heubert, 2000).

In this 21st century schools, high-stakes external testing appears to be a powerful force in shaping public opinions about the good standards and accountability of education (Anane, 2015; Amoako, 2019). In Ghana, West

African Senior High School Certificate Examination (WASSCE) results thereof determine entry of candidates into universities, polytechnics and the colleges of education. Examining bodies include West African Examination Council (WAEC), National Examinations Council (NECO) and National Board for Technical and Business Education (NABTEB) organise the high-stakes test on behalf of the country. It is a standardised examination in which candidates must pass at minimum of credit level in at least six subjects including English Language, Mathematics and Science.

In Ghana, examination such as the West African Senior School Certificate Examination (WASSCE) is becoming more and more high-stakes, as a result of such examination is used for determining the quality of a senior high schools, for school selection and placement in tertiary institutions and remedial classes respectively (Anane, 2010). Gradually, national assessments are being openly or secretly linked to policies that hold school systems, teachers and administrators and the students themselves accountable for students' performance (Anane, 2007).

Students' scores on national tests are, for example, reported in newspapers and other media as a matter of public accounting. In some cases, stakeholders such as opinion leaders are suggesting that students' performance be used as a basis for determining rewards and sanctions for schools and their staff. The results are also used in making decisions about which senior high school (SHS) is better usually through league systems. The pressure and stress to perform on these tests in Ghana has become intense for students, teachers, head teachers and school systems (Anane, 2007). As a result of

increased standards and demand for accountability, teachers and administrators began taking these tests and standards seriously (Grant, 2002).

In the Ghanaian context, stakeholders that control and manage public senior high schools assess the quality of the school system and teachers by the number of students who have six credits and above in the examination. That a candidate shall be educated up to the tertiary level has been interpreted to mean that he or she must have a minimum of six passes/credits. This further underscores the importance of WASSCE being conducted by the examining bodies such as WAEC.

According to Linn (2001), high-stake test sometime known as standardise testing is now serving as the basis for holding schools, teachers, and students more accountable. Due to that, a lot of importance is attached to level of success of candidates in the WASSCE. In some cases, proprietors of private basic and senior high schools attach promotion and increase in salary of teachers to number of students who do well in the examination being conducted by WAEC.

The status attached to standardized tests is not peculiar to Ghana. For example, in the United States of America, the 'No Child left Behind' policy means that standardized examinations play an important role for schools to get funding and for teachers to get or keep a job (Dee & Jacob, 2011). In England, testing begins at the age of seven; these tests are called the Standard Attainment Tasks 2 and Tests (SATs) (Gregory & Clarke, 2003). The purpose of the SATs is to show if students have reached the National Curriculum learning targets. School funding can be affected by the results of SATs. All of

these examinations are high-stakes examinations for schools and/or for students.

Due to the importance attached to success rate in the high-stakes examinations, teachers often struggle to meet the demands of proprietors, government and parents (Agbeti, 2014). That is, they struggle so that their students do well in the examinations and even teachers going to the extent of helping students to engage in examination malpractices (Grant, 2002). Students, on the other hand, struggle to satisfy their parents and guardians and also struggle to meet the requirements for admission into tertiary institutions for the fear of being mocked as failure (Lim, 2001). Because of this, there can be a “Washback effect” on teaching and learning. That is “shaping both what is taught and how it is taught” and often changing the frame in terms of what counts as worthwhile knowledge (Conway & Sloane, 2005, p. 28). Washback or backwash, also known as measurement-driven instruction (Cheng, 2005), is a common term in applied general education as the influence of testing on teaching and learning, which is a prevailing phenomenon in education.

The importance of Business courses in career aspiration of students in Business-based programs cannot be overemphasized. This is because business courses (that is, Financial Accounting, Business Management, Economics and Cost Accounting) are required for nearly all business-based programs in the University and Polytechnic. For example, in all universities in Ghana, programs such as, Procurement, Purchasing and Supply, Accounting, Economics, Management Studies require at least a credit pass in any of the business courses read at the Senior High School. It means, therefore, that any prospective candidate who fails to have a credit pass in any business courses

may not have the opportunity to actualise his or her dream to make a career in business-based program.

The literature on assessment point to the fact that both opponents and advocates agree that external assessment of high-stakes nature has a controlling impact on teaching and learning and thus has the potential to change the way teachers teach (Anamuah-Mensah Committee report, 2002; Chapman & Snyder, 2000; Firestone, 2004). The point of disagreement is the effect of the unintended consequences of this type of assessment on teaching and learning. The opponents underscore the unintended and often undesirable consequences of external assessment on teaching and learning. On their part, the advocates argue that the important issue to deal with is how to reduce the harmful effects on teaching and learning (Firestone, 2004). Their concern is how to align the divergent curriculum goals and actual teaching and learning that go on in school under the influence of external assessment (Wright, 2002).

Anane (2007) investigated the effect of high-stakes testing on curriculum implementation and instruction in secondary schools in Ghana and the findings revealed that, high – stakes testing has not resulted in higher quality of teaching and learning as teachers spend 28% of class time preparing students for test. In a similar study by Amoako (2018) also discovered that Basic Education Certificate Examination (BECE) as a high-stakes test drives curriculum implementation in Ghana, places our “national curriculum” and “teaching practices” at stake.

In other context, Cheng (1999) investigated the operation of the washback phenomenon on secondary school teaching in Hong Kong and found that the external high-stakes examination had a direct washback on

teaching in the examination class as the teachers realigned their teaching with the requirements of the examination. The activities they engaged in during lessons were directly related to what the students were expected to meet in the examination. Similar findings were made by Wright (2002). In his study of the impact of a high-stakes state mandated test on teachers in an elementary school in California. Through observation and interviews with teachers in Grade 2 where the mandatory testing starts and in kindergarten for comparison, he found out that the external test was driving teacher' goals.

Washback has been generally perceived as being bipolar – either negative (harmful) or positive (beneficial). Public examinations have been exploited as “levers for change” (Pearson, 2005) in order to induce positive washback and promote curricular innovation (Wall & Alderson, 1993; Qi, 2004; Cheng, 2005), though they may have negative repercussions for teaching and learning (Shohamy, 2004). Washback studies in education concentrate on the effects of public high stakes testing on their stakeholders, particularly when the examinations undergo changes, in aspects such as learning, teaching methods, curriculum and attitudes towards tests (Qi, 2004; Saif, 2006; Tsagari, 2009).

Public examinations can contribute to the process of educational innovation, influencing classroom procedures (Shohamy, 2001; Brindley, 2008). Empirical studies reveal varied findings regarding the influence of tests on different aspects of classroom instruction: some tests may have greater consequences for some areas of teaching and learning than others (*washback intensity* (Cheng, 2005).

It has been asserted that washback is a complex and multidimensional phenomenon (Alderson & Wall, 1993; Choi, 2008), and should not be considered an automatic or direct effect of examination (Bailey 1999; Spratt, 2005). The literature claims that some intervening variables beyond the examination *per se* may contribute to determining or precluding the amount and kind of washback impact. Some of these variables relate to teachers' characteristics, learners' characteristics and context (Spratt, 2005). These varied findings may indicate that each high-stake need tailor-made research to identify its washback.

Other studies have also confirmed that high-stakes public examinations may from the outset affect some stakeholders' perceptions and attitudes and hence, they may be capable of changing teachers' classroom behaviour and teaching content (Cheng, 2005; Shohamy, 2007). However, this change in the *how* (methodology) and the *what* (teaching content) is sometimes superficial rather than substantial, and the change may occur in the form of teaching and not in its substance (Cheng, 2005; Qi, 2000).

As explained in the preceding sections, there are many studies in the area of language and mathematics. More importantly these studies were conducted mostly in the Western Europe such as United Kingdom, US (Saville & Hawkey, 2004) and Greece (Tsagari, 2009) and in Asia such as China (Qi, 2004; Chen & He, 2003). Ayse's (2011) study conducted in Turkey was in the area of Mathematics. There is, however, dearth of empirical studies in the area of Business Courses and importantly there is dearth of literature on washback of high-stakes examinations on teaching and learning in the sub-Saharan Africa and especially in Ghana. In this respect, Shohamy (2007)

asserts that public examinations are powerful enough to influence teachers' classroom behaviour. However, the scope and nature of this influence are still uncertain, and still under investigation.

Statement of the Problem

Evidence available from literature suggests that there is pressure and stressful challenge for students, teachers, headteachers, and school system to perform well on high-stakes tests (Amoako, 2018; Anane, 2015; Agbeti, 2014). For instance, the heightened accountability and standards brought about by high-stakes testing has placed a greater emphasis on standardised test scores and has created stressful challenges for educational administrators across the country (Anane, 2015).

Because of the importance attached to success rate of students in high-stakes examinations, teachers often struggle to meet the demands of proprietors, government and parents (Anane, 2015). That is, they struggle so that their students do well in the examinations. Students, on the other hand, struggle to satisfy their parents and guardians and also struggle to meet the requirements for admissions into tertiary institution (Smyth, Banks & Calvert, 2012).

A lot of importance has been attached to the success of candidates in WASSCE, for instance, proprietors of private senior schools attach promotion and increase in salary of teachers to number of students who do well in the WASSCE (Adesina, 2017). Even such schools flaunt their success for all to see. This is because parents will likely send their children to schools which are known to have high success rate in WASSCE. Also, stakeholders that control and manage both public and private senior high schools assess the quality of

the school system and teachers by the number of students who have six credits as well as generative league tables to rank schools.

Berliner (2011) asserted that when the pressure is so high, students are more likely to be caught in cheating, teachers become vulnerable to help students engage in examination malpractices to meet required standards in fear of sanctions. This implies that the pressure and stressful challenge can have a controlling influence or impact on teaching and learning and thus has the potential to change the way teachers teach and students learn.

Again, Berliner (2011) stated that if tests are to be used to determine which students would advance and how teachers could be rewarded, it is crucial that stakeholders in education understand how best to use test results and how it is affecting students' examination habits, graduation rates, course content, level of student anxiety and teaching practices and attention paid to test scores by school administrators.

In the Ghanaian context, Anane (2010) conducted a study to investigate the influence of accountability pressures on Science, English and Mathematics teachers' classroom practices in senior high schools in the Ashanti Region. Amoako (2018) also looked at perceived effects of BECE on curriculum implementation on teaching and learning of English, Mathematics and Science in Kwahu-south district. However, these washback studies did not look at the unintended consequences of high-stakes test on students, who are at the centre of teaching and learning. That is, these studies failed to look at the influence of such examinations on; students' perception, students' learning practices and students' learning materials. Again, these studies failed to look at the influence of such examinations on teachers' perception, teachers'

classroom instructional practices as well as teaching materials used by teachers. Also, it appears the issue of unintended consequences of such examination has not been explored among business courses in some senior high schools. Moreover, these previous studies were conducted mostly at the Basic schools. It is, therefore, imperative that researchers begin to learn more about unintended consequences of testing on teaching and learning in Ghanaian schools.

According to American Psychological Association [APA] (2018), “because the stakes associated with external high-stakes tests are so high for so many teachers and students, research studies should begin and intensify to help investigate and learn more about the unintended consequences of testing in educational decision making”. Therefore, this study aimed at investigating the perceived washback effects of West African Senior School Certificate Examinations (WASSCE) on teaching and learning of business courses (Financial Accounting, Business Management and Economics) in senior high schools in the Eastern Region of Ghana.

Purpose of the Study

The main purpose of the study was to examine the perceived washback effects of WASSCE on teaching and learning of business courses in senior high schools in the Eastern Region. Specifically, the study seeks to:

1. Investigate the perceived washback effects of WASSCE on teachers’ perception in relation to teaching.
2. Determine the perceived washback effects of WASSCE on teachers’ classroom instructional behaviour.

3. Ascertain the perceived washback effects of WASSCE on the content of the curriculum.
4. Investigate the perceived washback effects of WASSCE on students' perception in relation to learning.
5. Determine the perceived washback effects of WASSCE on students' learning practices.
6. Find out whether washback effects of WASSCE existed among SHS 1, SHS 2 and SHS3 students.

Research Questions

The study explored a number of issues particularly focusing at the interplay between the effects or impacts of testing on teaching and learning processes in senior High Schools.

Specifically, the research questions were as follows:

1. What is the perceived washback effect of WASSCE on teachers' perception in relation to teaching?
2. What is the perceived washback effect of WASSCE on teachers' classroom instructional behaviours?
3. What is the perceived washback effect of WASSCE on the content of curriculum?
4. What is perceived washback effect of WASSCE on students' perception in relation to learning?
5. What is the perceived washback effect of WASSCE on students' learning practices?

Research Hypothesis

One research hypothesis guided the study.

H₀: There is no statistically significant difference of washback effects of WASSCE among SHS1 SHS 2 and SHS3 students.

H₁: There is a statistically significant difference in the washback effects of WASSCE among SHS1, SHS 2 and SHS 3 students.

Significance of the Study

The strong influence of high-stakes tests, such as WASSCE, on teaching and learning process has long been accepted in the field of education. The study of the effects of high-stakes testing on teaching and learning could provide educational administrators, teachers, students and other stakeholders with data for several purposes.

First, the findings of the study will provide valuable information to encourage institutions such as WAEC, NECO and NABTEB to improve the testing system, in order to better assess the goals and objectives of the broader curriculum and also promote the teaching and learning. Thus, the results of this study may have important implications for testing system by providing information for test developers to evaluate the test in several aspects and explore ways of producing beneficial washback on teaching and learning.

Second, the findings of this study would identify the potential unintended consequences of WAEC testing on teachers' decision-making which will assist the Ministry of Education (MoE), Ghana Education Service (GES) and heads of institutions to formulate policies to promote teaching and learning. Most importantly, the study highlighted the voices of teachers and students, the very people at the centre of the teaching and learning process.

Thus, the study will provide WAEC, MoE, GES and heads of institutions, involved in second cycle education with important information to help improve the policies and practice to help manage the roles public examinations play in shaping classroom practices in the senior high schools.

Above all, this study will educate test writers and researchers about washback, providing on-site discoveries about the nature of washback in the context of the research. So, this study is significant because it adds to the literature new insights about washback effects.

Delimitation

The study could have been conducted to take care of how test developers understand the effect of external assessment on teaching and learning and their intentions when they set questions for the examination. The study was delimited to only the washback effects of high-stakes testing on teaching and learning because the area of testing is so broad that it was not feasible to cover all areas.

Also, the study was conducted in the Eastern Region of Ghana. The justification for the choice of Eastern region was that, the researcher teaches in a senior high school in the Eastern Region and he had had the opportunity to interact with colleague teachers and students to find out how accountability pressures from stakeholders including head teachers, parents, media, chiefs, students) had influenced teaching and learning. Again, previous washback studies were conducted in the Ashanti region and Greater Accra Region. In order to learn more about the washback phenomenon, it was necessary to conduct the current study in a different location.

Moreover, the study was delimited to business program because the researcher is in the business field and he had the interest to explore how test-accountability pressure was influencing the teaching and learning. Again, it will not be feasible to cover all courses studied at the senior high school.

Moreover, the current study was delimited to public senior high schools and not including private senior high schools because, there were a few private senior high schools in the eastern regions that read business program so the researcher thought of excluding them.

Limitations

The major limitation of the research design used for this study was relying on self-reporting by respondents and as a result, respondents could give responses that may not reflect the actual situation or practices on the ground in spite of anonymity and confidentiality. In addition, the research instrument did not offer opportunity to me to collect additional information through observation and clarification from the research participants and this will not give a clear picture on washback effects. Other methods of data collection including observations and interviews would have given a clearer picture on washback effects.

Also, the relatively small sample size of 218 business teachers in twenty senior high schools may be difficult to generalise to the population of senior high school teachers in Ghana. Again, with 380 respondents (students) of a sample size, 320 respondents returned their questionnaires and this might limit the power of the various statistics.

Definition of Terms

High-Stakes Testing: It is an assessment to which important consequences such as school rating and judging teacher quality are attached to the result.

Washback Effect: This refers to the impact or influence of testing on curriculum design, teaching practices and learning behaviours.

Teaching to Test: Teaching based solely on content or material that is to be examined or tested.

League System: Ranking of Senior High Schools based on their percentage performances in WAEC examination.

Validity: This refers to the extent/degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests.

Organisation to the Rest of the Study

The study examined the perceived washback effects of high-stakes test (WASSCE) on teaching and learning of business courses in senior high schools in the Eastern Region. The study comprises of five chapters. Chapter one described the introduction which includes the background of the study, the research problem and purpose of the study, research questions, research hypotheses, significance of the study, delimitation, limitations, definition of terms and organization of the study.

Chapter two presents a review of related literature. The review comprises theoretical, empirical and conceptual review. It reviews literature on background and origin of the concept of washback. Also, literatures were reviewed on the direction of washback, washback effects of test on teachers'

perception, attitude and feeling, washback effects of test on teachers' instructional practices, washback effects of test on the curriculum and washback effects of test on students.

The methodology that was employed in the study is found in chapter three. This highlighted the research design, population, sample and sampling procedure, the research instrument and the pre-testing. It also described the reliability, the validity, the ethical consideration, procedure for data collection, and the data processing and analysis.

Chapter four presented the results of the study and discussion of the findings. Chapter five covered the summary, conclusion and recommendations of the study. It also captured suggestions for future research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter focuses on the theoretical underpinnings that shaped and guided this study. It begins with an exploration of the concept of washback by discussing various terms that have been used to describe this educational phenomenon. It then illustrates the mechanism of washback followed by a discussion of the washback phenomenon in different educational contexts such as teaching, learning, syllabus and curriculum, materials, etc. The sections explore how and why washback works to influence other components within the educational system, trace the rationale behind the use of tests, and examine their power to change teaching and learning. The chapter also presents a review of washback models of teaching and learning in the context of theoretical, conceptual and empirical review of washback.

Major emphases are on:

Theoretical Review

- a. Alderson and Wall Washback Hypothesis (1993)
- b. Nguyen's test washback model - effect on Teachers (2005)
- c. Nguyen's test washback model - effect on students (2005)

Conceptual Review

- a. Public examinations: Definitions and Concepts
- b. Washback: background and origin.
- c. Direction of washback

Empirical Review

- d. Washback impact of public examination on aspects of classroom related areas
- e. Washback effect on teachers' feeling and attitudes towards exams (Perception of Washback)
- f. Washback effect on instructional Practices (Methodology Washback)
- g. Washback effect on teaching material and curriculum (Curriculum Washback)
- h. Washback on learning Outcomes
- i. Washback on test takers

Theoretical Review

Mechanisms of Washback – Hypotheses and Models

This section reviews two models through which washback from examinations may operate. The two models discussed are: Alderson and Wall washback hypothesis and the model of Nguyen (2005) were adapted. These models have been the foundation stones for the evolvement of other models (Burrows, 2004; Cheng, 2005; Saif, 2006; Green, 2007; Tsagari, 2009).

Alderson and Wall Washback Hypothesis

Alderson and Wall (1993) proposed the Washback Hypothesis in an attempt to clarify the idea of washback and to serve as a basis for further research. The authors highlight that as an important step towards investigating washback, a researcher needs to consider a set of assumptions, which they call the Washback Hypothesis. As a result of reviewing studies conducted in

different contexts, and of their own work on O-level examination in Sri Lanka, they posit 15 hypotheses. These are:

1-A test will influence teaching.

2-A test will influence learning.

3-A test will influence what teachers teach.

4-A test will influence how teachers teach.

5-A test will influence what learners learn.

6-A test will influence how learners learn.

7-A test will influence the rate and sequence of teaching.

8-A test will influence the rate and sequence of learning.

9-A test will influence the degree and depth of teaching.

10-A test will influence the degree and depth of learning.

11-A test will influence attitudes to the content, method, etc. of teaching and learning.

12-Tests that have important consequences will have washback.

13-Tests that do not have important consequences will have no washback.

14-Tests will have washback on all learners and teachers.

15-Tests will have washback effects for some learners and some teachers, but not for others (Alderson & Wall, 1993).

Since this research concerns the influence of public high-stakes examination (WASSCE) on teaching and learning, the study will focus on and try to confirm fifteen versions of the above-mentioned hypotheses. Thus, this study will attempt to confirm the existence of this phenomenon, corroborating Alderson and Wall's (1993) answer to their rhetoric question 'Does washback exist?'

Nguyen's Washback Models

Nguyen (2005) proposes two models of washback on the teacher-level and student-level. Figure 1 displays the circle of testing effects on teacher-level. In the model, the double directional arrow from one factor to the other factor indicates the direction of the influence from the determining factor to the dependent one. The other directional arrow shows in turn interaction, the dependent factor becomes the determining one. These interrelationship forms a circle of the causal link

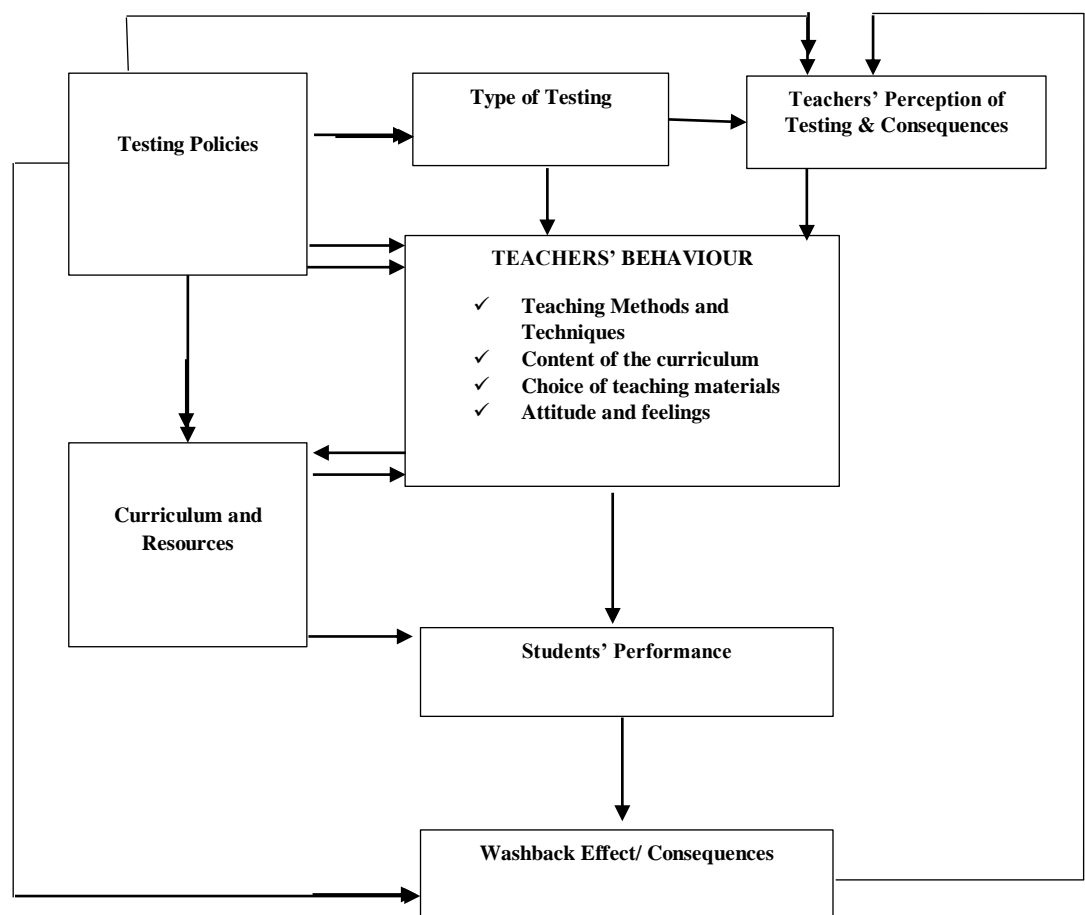


Figure 1: Nguyen's test washback model - effect on teachers (2005).

Examining the model (Figure 1) from left to right, it is seen that testing policy is the primary determining factor that can be intervened to enable either positive or negative washback on types of assessment, teachers' perception of

testing and its' consequences, teachers' behaviours, consequences of the test results and curriculum and resources (Nguyen, 2005) . Furthermore, next, types of assessment play a very important role that together with the testing policies may influence teachers' perception of testing and test types. They enhance changes in teachers' behaviours that lead to changes in attitudes and motivations and teaching content and method (Nguyen, 2005).

The model (Figure 1) reflects that curriculum, resources, and teachers' behaviours interact with each other in two ways that indicate by two arrows in opposite way. The model suggests that the curriculum and resources also directly influence students' actual performance. The model highlights that the outcomes of the changes and interactions lead to change in students' actual performance then consequences.

Nguyen (2005) also proposes another washback model. In the model below (Figure 2), the double directional arrow from one factor to another factor indicates the direction of the influence from the determining factor to the dependent one. The other directional arrow shows in turn interaction, as the dependent factor becomes the determining one. These interrelation forms a circle of the causal links:

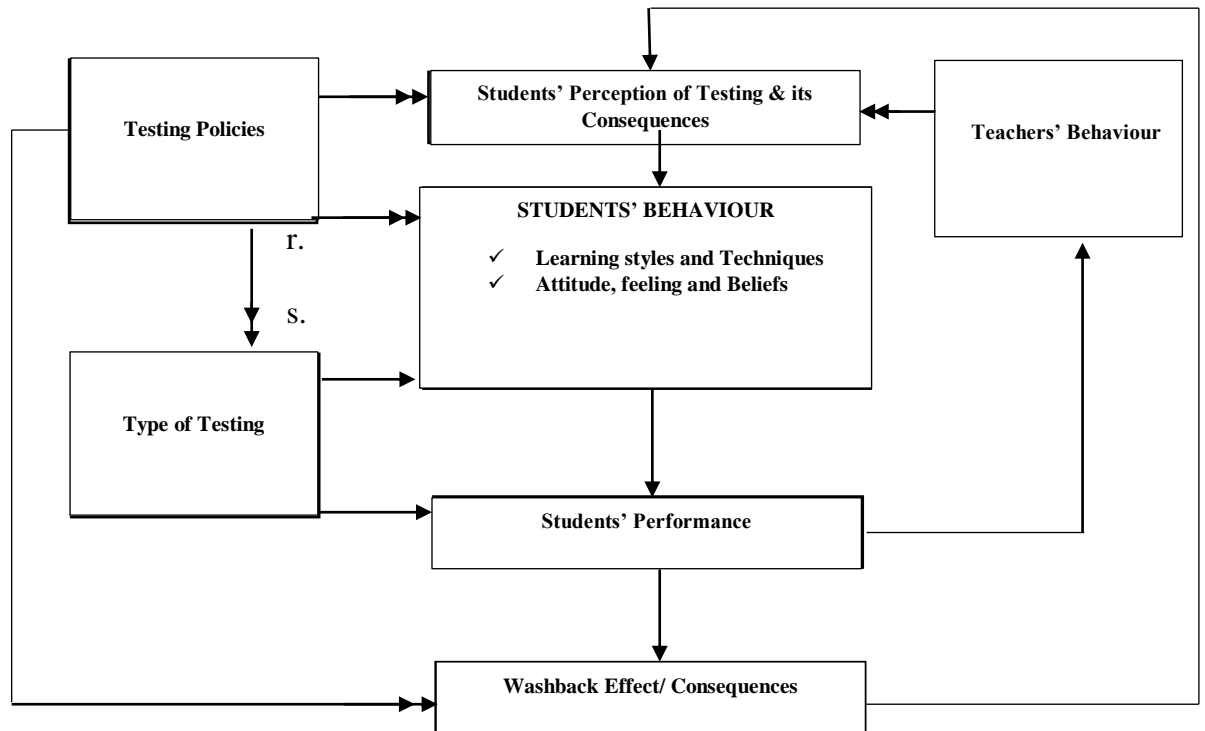


Figure 2: Adapted Nguyen's test washback model - effect on students (2005)

Nguyen (2005) suggests that testing policy is the primary determining factor that influences students' perception of testing and its consequences, types of assessment and the consequences of test results. The two models suggest that test washback effects, or more specifically content and method washback, pressure washback, and innovations in education can primarily be promoted by the testing policies and types of assessments, then teachers' perception of the testing policies and of the type of assessment in use. Hence, to enhance beneficial and minimise harmful washback, testing policies and types of assessment are the two primary factors that should be the first to intervene. At student-level, content and method washback and pressure washback are also promoted greatly by the change in testing policies, and teachers' behaviours.

So, to promote beneficial washback and minimise harmful ones testing policies, types of assessment and teachers' behaviours are the factors that should be given priority. The models discussed above have tried to rationalise that the testing policies, types of assessments, curriculum and resources play concerted role to generate beneficial washback on teaching and learning. However, Nguyen (2005) shows teacher-level washback and student-level washback separately. Though the models seem to be potential in term of washback generation, they are highly ambitious in term of teachers' actual behaviour in the class.

Conceptual Review

Public Examinations: Definitions and Concepts

Public examinations are synonymous with external tests which are administered and scored by external agencies or forces to evaluate learning outcomes or results with a decisive consequence or influence on test-takers. Public examinations are often used as instruments to select students as well as a means to control a school system, especially when the educational system is driven by tests or examinations (Cheng & Falvey, 2000; Herman, 1992; Smith, Noble & Junker 1991). That is, public examinations are commonly believed to have an impact on teaching and learning. Given that external tests or public examinations have exerted an influence on teachers and students with an associated impact on what happens in classrooms, such a phenomenon is denoted as washback or backwash.

The origin of public examinations is to be found in the school entrance and civil service examinations of China, which go back at least to the period of the Sui emperors (589-618) (with a prehistory going back much further) and

which achieved their most complex form towards the end of the Ch'ing dynasty (1644-1911) (Miyazaki, 1976). Inspired by the Chinese systems, examinations in written format began to appear in European schools in the 16th century, though it was not until some two hundred years later that public examinations of the type found in China were instituted in Europe for selection to universities, the civil service, and the professions. Public examinations are now a major feature of the educational systems of most European countries, which, in turn, passed them on to their former colonies in Africa, Asia, and the Caribbean, where they still flourish (Kellaghan, 1992). The United States, with some exceptions (e.g. the Regents' examinations in New York), has so far not adopted a public examination system. However, during the 1980s and 1990s, a number of proposals contained in reform reports, policy statements, and legislation have advocated a national system or systems of examinations for the country (Madaus & Kellaghan, 1991).

Although there is considerable variation in the form and administration of examinations from country to country (Madaus & Kellaghan, 1991; Noah & Eckstein, 1992), they generally share a number of characteristics (Kellaghan, 1993). First, the examinations are controlled to varying degrees at national or regional level (and sometimes also administered) by an agency or agencies outside the school (i.e. education board), usually a department of education, an examinations council closely related to the country's department, or regional examining boards. Second, the examinations are geared to syllabi which are usually defined by an agency outside the school, sometimes the same agency as administers the examinations. Third, examinations are usually provided in the traditional areas of the curriculum (such as science and languages).

Fourth, examinations are often formal terminal procedures, taken on fixed days under controlled conditions by all candidates taking the examination in a country or region at the end of a course of study. There is a little teacher involvement in assessing students for public examination certification in developing countries. Fifth, examinations are largely written, very often using the essay format, but sometimes making use of multiple-choice items, either in conjunction with other formats or on their own.

Finally, as a result of performance on the examination, the student is awarded a grade or mark in each subject examined. Public examinations normally are intended to serve a number of functions. The most obvious is to assess the competence of students' learning relative to some agreed standards. The results are then frequently used to discriminate among students with regard to their preferred futures: further education, admission to professional preparation, or employment. While certification is important, particularly for students who are leaving the educational system, there is often a danger of losing sight of this function because of the strong emphasis on selection.

Examination results are also often used, formally or informally, to provide evidence of school effectiveness, and schools and teachers may be held accountable for their students' achievements as reflected in examination performance. This use becomes more obvious when results for individual schools are published.

Washback: Background and Origin

Washback is a new but very complex phenomenon in the field of educational research. It is rarely found in the dictionaries published before 1990s. However, the word 'backwash' can be found in certain dictionaries

and is defined as “the unwelcome repercussions of some social action” by the New Webster’s Dictionaries, and “unpleasant after-effects of an event or situation” by the Collins Corbulid Dictionary.

However, before 1982, no washback study can be traced out in the field of general education. Washback or backwash, as it is sometimes called, is now a term that is commonly used in general education. Although washback is a relatively common term in our field, it is rarely found in dictionaries (Cheng & Curtis, 2004). Because of the importance of the study of Alderson and Wall (1993), as a landmark and milestone in the field of washback research, their study may be considered as an unavoidable work in the washback history.

Kellaghan, Madaus and Airasian (1982) are the first who used the term in their work, “The effects of standardized testing” which has extensive potentials for the future researchers. After the work of Kellaghan et al. (1982), other researchers have taken interest to study test washback and to examine how it works on teaching and learning. Between 1980 and 1990, very little empirical research has been carried out to investigate the washback effect of examinations in the field of general education. The other earlier studies in this area are those carried out by Wesdorp (1982) and Hughes (1988).

It should be pointed out that the former (Kellaghan, et al., 1982) was a general education study and not specific to a specific subject area. In their ensuing discussion, it is clear that evidence of either beneficial or harmful was often tenuous remaining unproven or, at best, inconclusive. For example, the study of Kellaghan et al. (1982) looks at the impact of introducing standardised tests in Irish schools as a case in point. As early as 1984,

Frederiksen publishes a paper called “The Real Test Bias”, in which he suggests that because test information is important in attempting to hold schools accountable, the influence of tests on what is taught is potentially great (Gipps, 2011).

Nearly 20 years ago, Alderson (1986) identified washback as a distinct and emerging area within the field of language testing. Around the same time, earlier to Alderson, Davies (1985) asked whether tests should necessarily follow the curriculum. He suggested that perhaps tests ought to lead and influence the curriculum.

Definitions of washback are nearly as numerous as the people who wrote about it (Bailey, 1999). Generally speaking, the educational phenomenon that describes the influences of tests on teaching and learning is referred to as “washback” (Alderson & Wall, 1993; Messick, 1996; Bailey, 1996) or “backwash” (Hughes, 1988; Spolsky, 1995; Biggs, 1995). The former has been widely used in language education—applied linguistics—whilst the latter in general education. Hughes (2003) succinctly states: “the effect of testing on teaching and learning is known as backwash”. Messick (1996) further states, “washback refers to the extent to which the introduction and use of a new test influences teachers and learners to do things they would not otherwise do that promote or inhibit learning” (p. 243). He notes an additional important dimension: “evidence of teaching and learning effects should be interpreted as washback only if that evidence can be linked to the introduction and use of the test” (p. 243).

Although washback is sometimes seen to be confined only to the unforeseen but unintended effects and not to the intended effects of tests

(Spolsky, 1995), there seems to be a consensus among educators that washback is described as any effects—positive or negative, intended or unintended—that are induced on teaching and learning as a result of administering examinations (Alderson & Wall, 1993; Bachman & Palmer, 2011; Cheng, 2005). For example, Cheng, (2005) states that washback indicates “an intended or unintended (accidental) direction and function of curriculum change on aspects of teaching and learning by means of a high-stakes public examination” (p.143). Thus, for this study, any impact or influence associated with high-stakes examination, positive or negative, intended or unintended, will be deemed washback.

Also, as noted by Messick (1996), the effects are only washback if they can be linked to high-stakes and use of the targeted test. The present study endeavours to explore whether or not the WASSCE has an impact on teaching and learning and is the said examination achieving its aim and objectives), i.e. intended consequences via WASSCE, and whether or not any other unintended consequences have emerged. In case of the examination not producing the intended washback or inducing this study, as recommended by Wall (2012), is to understand and reveal the reasons behind this failure to feedback into the process of redesigning or improving the examination.

Washback is described as the effect of the use of tests on what happens in schools (at the micro level) and society as a whole (at the macro level) (Andrews, 2004). However, it is argued that the term washback is used to refer to the effect of tests on teaching and learning at the micro level, whereas effects at the macro level are referred to as impact (Wall, 1997; Hamp-Lyons, 1997; Bachman & Palmer, 2011). Washback is, thus, deemed to be one

dimension or subset of test impact. Furthermore, washback can be defined according to the research conducted, the researcher and the context in which it is investigated. For example, Cheng (2005), in her Hong Kong washback study of HKCEE, used the term to “indicate an intended direction and function of curriculum change on aspects of teaching and learning by means of a change of public examination” (p. 21).

Similarly, as this work is a washback case study in the Ghanaian context, the term ‘washback’ is used to refer, specifically, to the extent to which WASSCE; which is a public examination generates changes in students’ learning, teachers’ teaching behaviour, testing practices, teaching materials and curriculum use. That is, as noted by Messick (2004), the effects are only washback if they can be linked to the public high-stakes testing. Lim (2001) points out various forms of washback in terms of the facets explored. Among those, three main forms are dealt with in this study. These include:

- a. Attitude/perception washback. This refers to the effect of the introduced examination on teachers’ attitudes and perception of the examination vis-à-vis instruction.
- b. Methodology washback. This implies how the new examination influences the way teachers plan and implements their classroom instruction, teaching and testing.
- c. Curriculum/textbook washback. This indicates the effect of the examination on the content of teaching as far as the current curriculum/textbook is concerned, i.e. teachers’ choice and selection of teaching material resources.

Some researchers have linked the kind of washback generated by administering a revised or new examination with test validity. For instance, Messick (1996) points out that washback is “only one form of testing consequence that needs to be weighed in evaluating validity, and testing consequences are only one aspect of construct validity needing to be addressed” (p. 243). Likewise, it is argued that washback is not the only manifestation of the consequential aspects of test validity (Wall, 2012).

Hamp-Lyons (1997) seconds this view, adding that: “[t]hese failures of test development can be identified by judgments made on the test itself [sic], and their consequences can be sought in classrooms, in teachers’ and learners’ behaviours, and in textbook materials” (p. 299). She elaborates that the effects of a test can be noticed in learners when they apply what they are being tested outside the classroom environment and in the role of this in society at large.

Interweaving the above views, the present study proposes that one form of the studied examination’s validity be linked with and judged by the kind of washback the examination generates. That is, the more beneficial washback induced from the examination on teaching and curriculum, the more valid the test will be considered, and vice versa. Further, the examination’s validity will be measured, as argued by Winke (2011), from the angle of “the overall quality and acceptability” of the test among different stakeholders, teachers and inspectors.

Direction of Washback – Positive and Negative Washback

Generally, washback can be analysed according to two major types: positive and negative, depending on whether it has a beneficial or harmful impact on educational practices. For example, a test may encourage students

to study more or may promote a connection between standards and instruction. Washback from tests can involve individual teachers and students as well as whole classes and programs. Bachman (2000) terms washback as: macro contexts, and micro contexts. With the micro level, the effect of the test on individual students and teachers; and the macro level, the impact the test may have on society and the educational system.

Some kinds of washback result from the effects of a test on the learners themselves, while other kinds of washback are more closely related to effects of a test on personnel involved in teaching (including influences on teachers, administrators, course designers, and materials developers ultimately influencing courses, programs and materials). Bailey (1996) calls two sorts of washback: learner washback and program washback, respectively. This idea overlaps, to some extent, Bachman and Palmer's (2011) micro and macro levels of washback, although they have included the influences on individual teachers under the micro category.

Positive Washback

At the micro level -classroom settings - washback of a test can be beneficial if it promotes effective teaching, and hence prompts productive/creative learning. Appropriate use of tests can encourage learners to learn and teachers to exert efforts in classrooms, use effective techniques and methods of teaching, and pay as much attention to weak students as to strong ones (Wall, 2005). The literature indicates that tests impact teachers and students in numerous ways.

Conclusions drawn from Shohamy's (1996) studies of two tests introduced in Israel revealed that the tests were capable of improving

educational behaviour. For the Arabic (ASL) test, there was an alteration in teaching practices evidenced in the placing of some aspects of language at the top of the teaching agenda, such as Arabic vocabulary; however, the intended washback (i.e. promoting learning the Arabic language) was quite limited, and decreased over time. But in the case of the EFL oral test, teachers devoted extra time to teaching spoken language, previously marginalized, which induced the intended washback. However, the learning tasks were identical to those tested.

Furthermore, for a test to promote beneficial washback, it should be purposive, well known to teachers and students, as well as reflecting the course objectives upon which the test content is supposedly based (Bailey 1996; Hughes, 2003; Cheng & Curtis, 2004). In this vein Messick (1996) states, “for optimal positive washback there should be little if any difference between activities involved in learning the activities involved in preparing for the test” (p. 212). That is, there should be some sort of overlap between the content of teaching or learning and the content of practicing it on one hand, and the content of the activities/tasks used in preparing for tests on the other. So, in the case of the targeted examination, it would be desirable if the constructs evaluated overlap with the content of the teaching curriculum (curriculum alignment) as the latter is based on learning (Orafi & Borg, 2009).

At the macro level -educational/societal settings - decision makers use tests to achieve the goals of teaching and learning, such as introducing new textbooks and curriculum (Shohamy, 1992; Cheng, 2005). Pan (2009) stated that: “tests are encouraged to promote the idea of lifelong learning and encourage people to learn” (p. 43). Moreover, administratively, high-stakes

tests, further to their purpose as a disciplinary tool, are deemed to bring about positive washback when they save time and money. The literature shows that examinations with automated scoring contribute significantly to reducing the cost of assessment (Toch, 2006; Haggie, 2008).

However, since most of these tests focus heavily on discrete-point testing (i.e. multiple-choice or true-false items) and eliminating integrative testing, they seem to induce negative rather than positive effects on the educational process, as they strip teachers of the spur to teach higher-level skills, and are based on questions of rote skill, encouraging rote learning (Toch, 2006). This, in turn, will undermine the quality of the test administered (Haggie, 2008). Given this study's assumption that washback effect is inevitable—a common view in education (Wall, 2005)—the speculation is that the washback effect of the examination under study (WASSCE) would likely be positive or negative, or both.

Toch (2006) posited positive washback would result when the testing procedure reflects the skills and abilities that are taught in the course. Therefore, when there is a match between the activities used in learning and the activities involved in preparing for the test, we say that our test has positive washback. It is of this view that Davies (1990) asserted, washback is inevitable and it is foolish to pretend that washback does not happen. Therefore, in order to prepare students for the examination, the teachers' way of teaching will be adopted in our classes and this positive washback helps us change the curriculum the way we want.

Positive washback can be summarised as below:

First, teachers and learners will be motivated to fulfil their teaching and learning goals (Anderson & Wall, 1993). Second, positive washback takes place when tests induce teachers to cover their subjects more thoroughly, making them complete their syllabi within the prescribed time limits. Third, good tests can be utilized and designed as beneficial teaching-learning activities so as to encourage a positive teaching-learning process (Pearson, 2005). Fourth, a creative and innovative test can quite advantageously result in a syllabus alteration or a new syllabus (Davies, 1990). Fifth, examination achieves the goals of teaching and learning, such as the introduction of new textbooks and new curricula (Cheng, 2005).

Sixth, tests induce teachers to cover their subjects more thoroughly, making them complete their syllabi within the prescribed time limits. Seventh, tests motivate students to work harder to have a sense of accomplishment and thus enhance learning. Eighth, good tests can be utilized and designed as beneficial teaching learning activities so as to encourage positive teaching-learning processes. Finally, decision makers use the authority power of high-stakes testing to achieve the goals of teaching and learning, such as the introduction of new textbooks and new curricula.

Negative Washback

The use of public examinations may have pernicious effects on an educational system at the micro level—classroom settings. Shohamy, Donitsa-Schmidt, and Ferman, (1996) state that policy makers usually use tests to promote their political agendas—gate keeping—and to seize control of educational systems. For example, Choi (2008) concludes that EFL testing has

had a big impact on EFL education in Korea across the three education stages: in elementary education, students are less motivated in their learning; in secondary education, where students are compelled to practice test-taking strategies to prepare for examinations; and in higher education "where obtaining high scores on EFL tests is deemed a prerequisite to successful graduation and employment" (p. 55).

Alderson and Wall (1993) and Abu-Alhija (2007) argue that tests will have bad effects if they induce anxiety among teachers. At the micro level, as a consequence of inappropriate test-preparation practices, a test will also have negative effects on teaching and learning when students' scores increase without a concomitant increase in learning, i.e. test score pollution, as pointed out by (Porter, 2002; Choi, 2008). A further deleterious effect that might be caused by examinations is that they may promote traditional ways of delivering instruction on the part of teachers. Traditional or dull teaching is described by Gorsuch (1999) as a) teacher centered; b) teacher-to-whole class oriented; c) focused on the learning of discrete facts; d) product oriented in that students are expected to repeat facts through recitation and written test.

Traditional teaching, thus, prompts teachers to get students to learn via low cognitive processes—memorization and rote learning—rather than comprehension and meaningful learning, and inhibits teaching, making teachers focus on the quantity rather than quality of learning, and on grade performance, rather than giving advice for improvement, which may demoralize the lowest achievers (Black & Wiliam, 2006).

Another possible negative effect associated with the use of public examinations in classroom settings is test-preparation practices. In this regard,

Popham (1991) proposed two evaluative standards through which it could be decided whether a particular way of preparing students for a test is appropriate. The first is professional ethics, which highlights the avoidance of any test-preparation practice that is unethical and may “involve violation of general ethical canons dealing with theft, cheating, lying, and so on”, and any involvement by teachers in such behaviours is likely to lead to “potential personal repercussions (e.g. loss of credential) and professional repercussions (e.g. reduced confidence in public schools)” (p. 13).

The second is educational defensibility, which stresses that students' scores on a test and their mastery of the content domain being tested should increase concomitantly. Otherwise, scores will provide a deceptive picture of students' achievement, which is considered educationally indefensible, and likely to generate negative washback. The other side of the coin related to test-preparation practices is teaching to the test, which considered as a test-related incidence of cheating that some teachers carry out (Anane, 2010; Agbeti, 2014; Amoako, 2018).

Studies have shown that most public examinations impose restrictions on curricula, teachers and students (Anane, 2010; Agbeti, 2014). For example, teachers tailor classroom practices to meet examination requirements and improve students' scores. This impairs educational quality by distorting the curriculum, and trivializes some important aspects of learning, i.e. narrowing the curriculum (Shohamy, 2001; Cheng & Curtis, 2004; Saif, 2006). These repercussions will not only have pernicious consequences on classroom settings at the micro levels, but also will reverberate negatively across the education system and society at large—the macro levels.

Furthermore, some washback studies have also noted that classroom instructional time has been usurped by tests: teachers spend a lot of time on test-oriented activities (Anane, 2010). Andrews (2002) found that two-thirds of classroom instructional time was spent working with examination-related materials. However, this should not be perceived as a negative effect if the time allocations for test preparation were spent on more meaningful learning tasks.

As Brown (2002) states washback becomes negative washback when there is a mismatch between the content (e.g., the material/ abilities being taught) and the test. Washback is harmful:

- a. when training for a particular test comes to dominate classroom work.
- b. when teachers teach one thing and the test then concentrates on another one.
- c. and when teachers end up “teaching to the test.

Actually, much teaching is always directed towards testing and much time of the class is spent on materials that appear in the test. Sometimes, the objectives and contents of the test do not appeal to students and teachers. For example, some students like and need to learn concepts, but the test they have to undergo is discrete-point. Both positive and negative washback work at both level: micro-level (classroom settings), and at macro-level (educational and societal system). Some of the reasons as well as the outcomes of the negative washback are summarised below:

- a) Test comes to dominate classroom work.

- b) There is no correlation between test objectives and curriculum objectives.
- c) Teachers teach one thing and the test then concentrates on another one,
- d) Teachers tend to ignore subjects and activities that are not directly related to passing the examination, and tests accordingly alter the curriculum in a negative way.
- e) Students may not be able to learn real-life knowledge, but instead learn discrete points of knowledge that are tested.
- f) Tests bring anxiety both to teachers and students and distort their performance.
- g) Teachers tend to ignore subjects and activities that are not directly related to passing the examination, and tests accordingly alter the curriculum in a negative way.
- h) The tests fail to create a correspondence between the learning principles and/or the course objectives.
- i) An increasing number of paid coaching classes are set up to prepare students for examinations, but what students learn are test-taking skills rather than language learning activities.
- j) Test narrow down the curriculum, and put attention to those skills that are most relevant to testing.
- k) Decision makers overwhelmingly use tests to promote their political agendas and to seize influence and control of educational systems.

Likewise, Shohamy (1992) identifies some of the conditions that may lead to negative washback:

- a) When reliance is on tests to create change,
- b) When emphasis is mostly on proficiency and less means that lead to it,
- c) When tests are introduced as authoritative tools, are judgmental, are prescriptive, and dictated from above, and
- d) When the writing of tests does not involve those, who are expected to carry out the change- the teachers.

The question is how to promote the intended washback of a test and minimise the possible counterproductive reactions. First, the test must accurately reflect course objectives and the principles of mastering the knowledge need. This will lead teachers and learners to appropriate teaching and learning styles and enable beneficial washback to operate. If the test is at variance with the course objectives, it will require teachers to focus their teaching on the test alone and cause harmful washback.

Second, teachers, administrators and others involved should be trained and provided with information concerning the test, such as the aims, item type, scoring systems and specimen papers. Competence and familiarity will help teachers and administrators to work properly toward the test, and limit misuse of test and its results (Swain, 2003). Next, test consequences play an important role in enabling either beneficial or harmful washback to operate. The more profound the consequence, the greater washback effect is.

Educational settings would help to balance beneficial and harmful washback in reducing test pressure toward teachers and students by

appropriate continuous assessment. Furthermore, apart from the test itself there are many factors within a society, particularly the educational environment with its typical conditions all influence the behaviours of teachers and students. Nevertheless, to what extent these factors operate much depend on how they interact with each other in a specific circumstance.

Empirical Review

Washback Effects on Teachers' Feelings and Attitudes Towards Examinations (Perception Washback)

Odo (2012) states that, “researchers are becoming progressively more aware of the negative social impact large-scale high-stakes tests can have on the lives of learners – particularly those who are most vulnerable – when the results of these tests are used to make decisions that unfairly limit the life choices of these learners” (p. 2). As a consequence, however, it is contended that an inevitable initial step causing the washback effect is that the nature of a test might first influence teachers' feelings, attitudes and perceptions—evaluative reactions. These feelings and attitudes, being likely as a response to learners' expectations, might in turn affect how teachers carry out their work (Hughes, 1993 cited in Bailey, 1999).

Moreover, the literature has indicated that examinations, especially those newly-introduced or revised, influence stakeholders, especially teachers' attitudes and feelings towards their instructional behaviour in the sense that they “increase teachers' stress and lower their morale” (Abu-Alhija, 2007), or, in contrast, motivate teachers to work harder and adopt innovative methods and techniques “more in line with communicative and, to some extent, humanistic teaching” (Prodromou, 1995). In her HKCEE study, Cheng (2005)

noted that teachers were anxious about how their students, especially the less outspoken ones, would pass the high-stakes examination. One of the teacher interviewees in Cheng's study declared she would feel guilty if she did not familiarize her students with the examination formats and content.

This is echoed by Tsagari (2009b), who investigated examination influence on participants' perceptions and material design in Greece. Interviews with teachers revealed that they feel anxious and stressed by trying hard to cover all the materials on the syllabus. In her preliminary study in the same context using diaries to gather her research data, Tsagari (2009a) also reported that; "Evidence of more intensive washback was recorded in the diaries as the date of the examination drew closer. This reached a peak in the weeks prior to its administration and was accompanied by intense physical reactions such as upset stomach, headache, and sickness" (p. 7).

Shohamy (2007) stresses that there is a need to examine the ramifications of tests on stakeholders in relation to tests' uses, misuses, fairness, biases, and discrimination. In their recent washback study, Cheng et al. (2011) investigated stakeholders' (students and parents) perceptions of a recently introduced high-stakes nation-wide examination in Hong Kong. The study investigated students' perceptions of the impact of the introduced examination in relation to their language learning, and parents' perceptions of their role in the process. Through students' questionnaires, the authors found straightforward connections between students' perceptions of examination-related learning activities and their perceptions of their levels in English (similar results were drawn from Cheng, 1998).

Moreover, based on questionnaires disseminated to students' parents, the study demonstrated that parents' perceptions of the examination and their opportunities to know about it significantly and positively predicted their role in supporting their children with an utmost aim to boost their children's scores on the examination. The study concludes that parents' perceptions about the introduced examination are directly and significantly related to their children's perceptions about the examination (Cheng, 2005, p. 221), which in turn would likely directly or indirectly affect the teacher in class. Thus, teachers are affected by the expectations of other stakeholders. Particularly, they are pressured, for instance, by school administrators, students and their parents (systemic stressors in Gregory & Burg, 2006) to direct their methodologies (Wall, 2005).

Consequently, this may present teachers with a dilemma leading to what Spratt (2005, p. 2) calls "a tension between pedagogical and ethical decisions": either to practice what they would like to teach stemming from their own philosophy of what real learning is, or to be enslaved by teaching to the test to enable their students to pass examinations, especially when those examinations are of low quality—poorly constructed—in terms of the constructs they measure. Thus, the dictates of high-stakes tests may reduce the professional knowledge and status of teachers and exercise a great deal of pressure on them to improve test scores, which eventually makes teachers experience negative feelings of shame, embarrassment, guilt, anxiety and anger (Madaus, 1988; Smith, 1991; Gipps, 2011).

Furthermore, the literature shows that the pressure associated with high-stakes tests leads teachers/educators to cheat, sometimes in subtle ways.

Amrein-Beardsley, Berliner, and Rideau, (2010), for instance, categorized three degrees of educators' cheating in terms of severity in response to high-stakes tests: the most serious degree, is unforgivable and inexcusable behaviour as wilful and premeditated, which some teachers do with malice and forethought; the second degree may be caused by a teacher's casual lack of concern; and the third degree might be caused by indifference or carelessness, but not premeditated or intended (Amrein & Berliner, 2010).

Amrein-Beardsley et al. (2010), noted similar behaviour among students when sitting their examinations. They concluded by noting that although educators' cheating is frowned upon by the vast majority of people, "the conditions under which educators now work, and the high-stakes testing policies by which they are now controlled, have pressured more educators into doing so [i.e. cheating]" (p. 234). As one aim to avoid such negative behaviour from the part of the teacher as well as the learner, some countries' education systems have witnessed the adoption of new technologies in their assessment programmes, such as automating scoring of examination papers and mechanically disseminating the results of examinations to improve the marking quality and the way tests are controlled and monitored (Newton & Meadows, 2011 and also testing where an entire issue was devoted to the development of automated scoring and feedback systems, the editorial written by Xi, 2010).

Despite their deleterious effects, however, pressure on teachers and their anxiety associated with the introduction of high-stakes tests can also have positive effects on the educational process. It may make teachers more accountable. Conclusions drawn from the studies of Shohamy et al. (1996),

Andrews, Fullilove, and Wong, (2002) and Ferman (2004) demonstrated that teachers focused on the skills when teaching as these were tested in the examinations, encouraging teachers to spend more time on more meaningful learning tasks.

In this regard, Gregory and Burg (2006) underscore that whilst tests induce negative consequences, they may have some positive effects on instruction: the extent to which a teacher provides explicit structure during lessons such as providing frequent previews and reviews, and reduces the density of instruction and content input have both been identified as potentially reducing the debilitating effects of test anxiety on student achievement (p. 44).

In a similar vein, Wall's (2005) observations and interviews with teachers revealed that they had mixed but mainly positive reactions towards the examination. Further, Amengual-Pizarro (2009) reported that the majority of teachers in her study seemed to have positive attitudes towards high- stakes testing. She concluded that, according to teachers, the test "was thought to be useful and necessary" as well as "reliable" (p. 592).

To conclude, high-stakes tests do exert washback effects on teachers' feelings and attitudes, ranging from positive to negative, but what is not clear is how and to what extent these effects generate effective teaching. So, research on test anxiety and its effects on teachers during their teaching are worth investigating in relation to washback. However, this study endeavours to cast light on teachers' feelings and perceptions towards the WASSCE, and the extent to which these perceptions have an influence on teaching and learning.

Washback Effects on Instructional Practices (Methodology Washback)

This study views washback effect from the standpoint of teachers' classroom practices and curriculum use. Since teachers are the key factor in the implementation of reform (Brindley, 2008) and “the ‘front-line’ conduits for the washback process related to instruction” (Bailey, 1999, p. 17), This section expounds on how teachers' instructional practices may change through public high stakes examination. Teaching practices, in this study, are referred to as the teaching methods, techniques and activities teachers use or adhere to in their instruction; along with, their classroom assessment practices—on-going tests—these all constitute “methodology washback”.

The literature has shown heterogeneous findings on the extent to which tests induce changes in teachers' classroom instruction. The findings in this area indicate that washback intensity registered various levels, from heavy washback to zero washback. Using teachers' questionnaires, Stecher, Chun, and Barron (2004), investigating the influence of WASL tests on methods teachers used in teaching writing, found that teachers changed their methods to reflect test requirements.

Likewise, in her washback study, Amengual-Pizarro (2009) examined the influence of the ET test included in the SUEE on various aspects of teaching. Her survey study revealed that virtually all teachers reported that their methods of teaching were considerably influenced by the test. For instance, she found that practicing students' oral production was dramatically reduced, as it was not assessed in the ET test. She concludes: contrary to previous studies that found no straightforward connection between the test and teachers' methodology [...], the results of this study also appear to indicate

that the ET affects the methodology teachers employ in actual class teaching adapting it to the purpose of the test" (p. 594).

Shohamy's (1993) study on three tests in Israel revealed that the methodology teachers adhered to became more "test-like" as the examination approached. Shohamy et al. (1996) revisited the washback effects of the same examinations to probe washback over time. Regarding the EFL test, students' questionnaires and interviews with teachers and inspectors revealed a similar washback effect (i.e. to a large extent positive), but in the case of the Arabic test and L1 reading test, the washback on teachers' teaching methods was severely limited, or even non-existent. This is ascribed to the purpose for which test scores are used, the stakes (high or low) and the status of what is being tested (Shohamy, 2001).

However, one might be cautious about the above reported findings and conclusions as they largely rely upon quantitative (i.e. indirect) methods of data collection—questionnaires—which are deemed to provide insufficient evidence for elucidating a vivid picture of washback effects from examinations because "we need to look closely at classroom events by using direct research methods for data collection] in particular, in order to see whether what teachers and learners say they do is reflected in their behaviour" (Alderson & Wall, 1993, p. 127), as "teachers may hold beliefs that are not compatible with the practices" (Muñoz & Álvarez, 2010, p 46)

Nonetheless, some studies using direct research methods, such as classroom observation, found changes in teachers' teaching methodologies by means of public examinations. An example is Watanabe's (1996) study in Japan. Based on classroom observation of two teachers, he found that they

were influenced by the test in terms of how they teach, but the degree of this influence contrasted from one teacher to another, dependent upon other factors. Benefiting from the use of video records of tests, grading of tests and discourse analysis in investigating the influence of the addition of an oral component to the use of English (UE) examination on students' oral performance in Hong Kong, Andrews (2002) found similar results, as did Burrows (2004).

They reported that: "the examination has had some sort of effect on students' spoken output" (p. 220), an influence increased over time which was attributed to teachers' familiarities with the examination and its requirements, thereby (in addition to students' expectations) teachers changed their teaching methods and techniques toward the examination. On the other hand, several studies conclude that tests have little or no effect on teachers' teaching methodologies. Wall and Alderson's (1993) Sri Lankan study, which examined the effects of introducing a new examination that was intended to encourage a more communicative approach to teaching, revealed that the examination "has had virtually no impact on the way that teachers teach" (p. 127). This finding is similar to that of (Qi, 2004) and (Cheng, 2005).

For instance, Cheng (2005), undertook a longitudinal washback study to investigate the influence of a newly revised public examination, HKCEE, on aspects of teaching and learning. Although the examination was designed to engineer positive washback by exerting more task-based approaches to teaching and learning, the data elicited from teacher and student questionnaires, interviews and classroom observations indicated that washback effects of the examination on teaching were limited. She comments: "the way

the teachers carried out their teaching remained more or less the same, whether the testing syllabus was the old one or the new one” (Cheng, 2005, p. 26). She thereby suggests that teachers’ teaching methods in classrooms may remain unchanged; however, their teaching activities may change as a result of examination change; for instance, reading aloud was replaced by role plays and discussions, but both were instructed through drilling.

Conversely, Watanabe (2000), who investigated washback effects of a pre-college English section examination on instruction in Japan through classroom observations and teacher interviews, reported that teachers in his study “claimed that they deliberately avoided referring to test taking techniques, since they believed that actual English skills would lead to students’ passing the examination” (p. 45). In conclusion, given that classroom observation is an effective method for detecting examination influence on teaching and learning, washback effect on teaching methods seems not to be inevitable, despite, in many cases, the studied examinations are designed to require a modified methodology.

The reported findings seem to be in line with one version of Wall and Alderson’s Washback Hypothesis: “Tests will have washback effects for some learners and some teachers, but not for others (p. 121). However, they are rather more equivocal with regard to the other version: “A test will influence how teachers teach” (p. 120). Thus, as far as thoroughly empirical investigations of classroom teaching methodologies as a result of high-stakes examinations are concerned, a gap seems to emerge in the literature of washback effects, which is an issue worth scrutinizing in the present study.

Additionally, it appears that teachers can play an essential role in fostering different forms of washback, and thus, as noted by Spratt (2005), they play a significant role in determining the types and degrees of washback impact, promoting (or inhibiting) positive washback. Keeping this in mind, teachers (and inspectors—expert teachers) were targeted as the main population of the study.

Washback Effects on Teaching Syllabuses and Curricula (Curriculum Washback)

Many researchers (e.g. Anane, 2010; Agbeti, 2014; Amoako 2018) of high-stakes tests attest that tests are responsible for narrowing the school curriculum by directing teachers to focus only on those subjects and skills that are included in the examinations. As a consequence, such tests are said to “dominate and distort the whole curriculum” (Vernon, 2004). A test was considered to have beneficial washback, when preparation for it did not dominate teaching and learning activities narrowing the curriculum.

When a test reflected the aims and the syllabus of the course, it was likely to have beneficial washback, but when the test was at variance with the aims and the syllabus, it was likely to have harmful washback. Wall and Alderson (1993) put forward the 15 hypotheses, highlighting more specifically some of the ways in which a test might affect teaching and learning. The following are the hypotheses that relate to syllabus, curriculum, and teaching contents:

- (3) A test will influence what teachers teach; and
- (5) A test will influence what learners learn; and
- (7) A test will influence the rate and sequence of teaching (P); and

(11) A test will influence attitudes to the content, method, etc. of teaching and learning.

Examination should reflect the syllabus and curriculum, and since not everything in a curriculum can be tested in an examination, the areas that are assessed should be ones that are considered important. It is also important that, same items and contents should not be tested again and again. Insofar as possible, modes of testing (e.g., written, practical, oral) should be diverse to reflect the goals of curricula. The format and contents of the public examination should be reorganized every year. The use of commercially produced clone tests materials in the class should be discouraged.

Teaching to the test universally occurs in either the practice of frontloading or backloading. If a high match exists between the curriculum and the test, teaching to the test is inevitable and desired. Otherwise, the data produced by the test is not useful in improving teaching and learning. In this case, using tests as the source to develop curriculum runs the risk of accepting and defining learning only in terms of what is tested in the test.

A curriculum provides a focus for the class and sets goals for the students throughout their study. A curriculum also gives the student a guide and idea to what they will learn, and how they have progressed when the course is over. Examinations or high-stakes tests exert a considerable impact on what, and how, teaching and learning are conducted in the classroom. Alderson and Wall (1993) elaborate, saying that “for teachers, the fear of poor results, and the associated guilt, shame, or embarrassment, might lead to the desire for their pupil to achieve high scores in whatever way seems possible.

They point out this might lead to ‘teaching to the test’, with an undesirable narrowing of the curriculum” (p. 118).

Alignment of the curriculum refers to the match between the content and format of the curriculum and the content and format of the test. Curriculum alignment is a process to improve the match between the formal instruction that often occurs in the classroom and the instrument that is used to measure the instruction outcomes. It is now proven fact that washback has a deep relation with the syllabus and curriculum. Test contents can have a very direct washback effect upon teaching curricula. Tests can affect curriculum and learning (Alderson & Wall, 1993). Shohamy (1996) define curriculum alignment as “the curriculum is modified according to test results” (p. 6).

Curriculum alignment focuses on the connection between the testing and teaching syllabus (Andrews, 1994; Madaus, 1988; Shepard, 1993). Systemic validity implies the integration of tests into the educational system and the need to demonstrate that the introduction of a new test can improve learning (Cheng, 1997).

Frederiksen and Collins (2004) state that ‘A systematically valid test is one that induces in the educational system curricular and instructional changes that foster the development of the cognitive skills that the test is designed to measure’ (p. 36). Pierce (1992) states “the washback effect, sometimes referred to as the systemic validity of a test (p. 687).

In this study, teaching materials and curriculum refer to the content of teaching and textbooks used to deliver instruction in the context of study. Wall (2012) points out that washback impact on curriculum and teaching materials can materialize when teachers and students “pay more attention to certain

parts of the teaching syllabus at the expense of other parts because they believe these will be emphasised on the test” (p. 79). Wall's statement was based on findings from previous washback studies, which have explicitly shown that teachers, for instance, design their teaching materials and content around tests, called curriculum alignment (Smith, 1991; Wall & Alderson, 1993; Stecher, 2002; Cheng, 2005; Abu-Alhija, 2007, Choi, 2008). Wall and Alderson (1993), for example, observe, “high-stakes examination has a demonstrable effect on the content of lessons” (p. 8).

Nevertheless, Shohamy et al.'s (1996) study of the impact of the ASL test and the EFL test shows a slightly different picture. They report that the Arabic test induced little effect on teaching content whilst the EFL oral test did. Shohamy et al.'s results may indicate that the stakes of the test are influential in determining the amount of washback; that is the higher the stakes, the greater the effect, and vice versa. In their New Zealand IELTS study, Read and Hayes (2003) noted that in 90 percent of cases, examination preparation materials were exploited.

Cheng's (2005) findings are once again similar. She reported that the high stakes examinations have a tremendous impact on teaching materials, in that new textbooks were published and distributed to schools before the examination was administered. Cheng (1997) ascribes this to “the highly adaptable and commercial nature of Hong Kong society”, and also notes that, “textbook publishers in Hong Kong not only provide teaching materials but also detailed teaching and learning activities with suggested methods” (Cheng, 2005, p. 34). However, the quality of such new materials has not been

investigated by Cheng to determine which of these materials generate positive or negative washback.

Moreover, teachers may be influenced by examinations in the way that they create their own materials and resort to past or mock exams. For example, Andrews (1995) and Lam (1995), who independently investigated content and textbook washback of UEE in Hong Kong, found washback effect on teaching materials, that "positive washback is evidenced by teachers creating more authentic materials from the mass media, [and] producing meaningful learning activities" (Lam, 1995, p. 95). Similarly, Watanabe (2000), like Tsagari (2009), noted that teachers "tried to innovate during examination preparation classes ... using a variety of self-made material" (p. 44). However, Watanabe's (1996) study, again, showed incompatible results.

Utilising classroom observation to investigate the influence of the university entrance examination on EFL classrooms in Japan, with special reference to the relationship between the examination and the use of the grammar-translation method of teaching, the author noted that teachers were not necessarily teaching skills such as writing and listening, although these were tested. Additionally, some washback studies have mentioned the time factor in relation to the use of examination materials. As the examination approaches, there is a heavier use of mock examinations and more examination-related materials, with more time spent on these materials. For example, Andrews (1995) speaks of the role played by published materials, reporting that teachers spent an "estimated two-thirds" of classroom [instructional] time on examination-related published materials, which, as the

author advocates, “represent a limiting of focus for teachers and students rather than a broadening of horizon” (p. 80).

Washback impact on curriculum and teaching materials was also documented in studies investigating curriculum innovation and implementation uptake in EFL/ESL classrooms. The studies highlighted that high-stakes public examinations do affect the content of teaching and curriculum, and the way teachers deliver instruction. For instance, Gorsuch (2000) investigated teachers’ practices in relation to EFL curriculum reform in Japanese high schools. She noted that although the reform urged the use of the all skills equally, the examination administered to the same schools emphasized testing the knowledge of vocabulary, grammar and language usage.

Comparable results were also reported by Agrawal (2004), Orafi (2008) and Orafi and Borg (2009). Agrawal (2004), for instance, who investigated the implementation of ESL curriculum innovation in some Indian secondary schools, reported that while the teaching syllabus focused on developing oral skills, instructors tended to marginalize these skills on their teaching agenda because they were not included in the examinations written by the authority of education.

Similarly, Orafi (2008) and Orafi and Borg (2009), using classroom observations and interviews, examined how five secondary EFL teachers implemented the English language curriculum, which was communicatively oriented, in Libyan schools, the same context of this study. The authors noted that teachers failed to implement their instruction as recommended by the curriculum. They identified three main factors that had an impact on the way

teachers interpreted and implemented the curriculum: teachers' beliefs about teaching and learning; teachers' teaching experience; and contextual factors, the most influential of which was the examination system at the time as there was a gap between the orientation of the curriculum and that of the examination system.

In summary, contrary to washback effect on teaching practices discussed in the previous section, it is evident that, in many cases, high-stakes tests have a considerable effect on teaching materials and teaching content. These results thereby are consistent with one of Alderson and Wall's 15 versions of the Washback Hypothesis: "a test will influence what teachers teach" (p. 120). Thus, one of the aims of this study was to test this claim, to explore whether the high stakes public examination in the context of the study will bring about washback on the curriculum, to assess the extent to which the findings of this study would be consistent (or inconsistent) with the findings of previous washback studies reported above.

To conclude, it seems that the findings of washback research on examination influence on diverse aspects of teaching and learning are contradictory. That is, washback intensity of a test varies in degree from one area of teaching to another and from one teacher to another. One might wonder whether it is the examination per se that is the cause of these contradictions, or other mediating factors. The following section tackles some of these issues.

Teaching to the Test, one outstanding practice associated with high-stakes tests is the phenomenon of teaching to the test. This is the practice of teachers identifying the content and format of the external assessment and

teaching similar content in the same format. The intention is to prepare students in such a way that when they meet similar items on the test, they will have little difficulty in getting the right answers. Teaching to the test is inevitable in high-stakes testing contexts where teachers are concerned about their students doing well. Smith (1991) confirms that, when pressure for accountability is transmitted through school administrators to teachers, the tendency is for teachers to respond by teaching to the test. This is done to avoid the sanctions associated with poor performance of students.

Firestone and Mayrowetz (2000) identify teaching to the test under high-stakes tests in the USA to involve teachers paying attention to the content of the standardized tests while in Britain it takes the form of revisions and paying attention to past examination questions. The findings of Preece and Skinner (1999) also confirm that in a high-stakes context, teaching to the test is prevalent and is even encouraged by school administrators through symbolic gestures such as exhortations and admonitions to teachers. This is done with the aim of ensuring the survival of their schools in a competitive climate where school quality is seen, to some extent, to be dependent on the “league table”. It is apparent that teaching to the test is the mechanism through which external assessment narrows down the curriculum and it occurs as teachers pay attention to the test content at the expense of other syllabus content.

Washback on Teaching and Learning Materials

The term ‘material’ is used here to refer to the prescribed textbooks, guidebooks and past question papers. Examination-related textbooks and other materials can vary in their type of contents. Very often, tests promote a boom of test related materials, and thus, influence what teachers teach in the

classroom, but tests may also encourage teachers to use additional materials from a variety of sources. They range on the one hand from materials that are highly exam technique oriented, and make heavy use of parallel examination forms, to those on the other hand that attempt to develop relevant language skills and language.

A teacher's choice of materials relies on a number of factors such as the purpose of the test and the availability of ready-made materials. Generally, the studies refer particularly to those materials at the 'highly examination oriented' end of the spectrum. A large number of studies discuss washback on materials in terms of materials production, the use of materials, student and teachers' views of examination materials, and the content of materials. Most teachers know from their own experience of the rows of examination-related materials available on the shelves of bookshops and staff rooms, and of the new editions of course books and other examination materials that are issued when examinations are revised.

They find that in relation to the EFL examination, new material has been published and marketed since the announcement of the test changes became public. Teachers' use of materials seems to vary to large extent. Lam (1994) speaks of teachers as 'textbook slaves' and 'examination slaves' (p. 91). He finds that large numbers of teachers rely heavily on the textbook in examination classes, and more heavily on past papers. Lam (1994) also reports that teachers do this, as they believe that the best way to prepare students for examinations is by doing past papers.

Andrews et al. (2002) speak of the large role played by published materials in the Hong Kong classroom, citing a previous study by Andrews

(1995) in which the teacher respondents were found to spend an estimated two-thirds of class time working on examination-related published materials. Cheng (1997) suggests that a reason for this may be that the examination textbooks in Hong Kong not only provide information and activities but also suggested methods for teaching and suggested time allocations.

The researchers such as Fullilove (1992), Wall and Alderson (1993), Lam (1994) and Cheng (1997) suggest that test requirements may promote test-related materials, and that these materials affect what teachers instruct because they tend to utilize textbooks to assist their students. However, some studies (e.g. Hawkey, 2006), indicate that tests may encourage teachers to develop multiple materials rather than solely depending on textbooks.

Wall and Alderson's (1993) Sri Lankan study states that a large group of teachers "believe they have to follow the textbook faithfully because the examination may test any of the content therein" (p. 63). Cheng's (1997) HKCEE (Hong Kong Certificate of Education Examination) and Fullilove's (1992, cited in Bailey, 1999) RUE studies reveal the booming market for publishing test-related materials. All these studies similarly find that most teachers heavily depend on textbooks.

Andrews (2002) also speaks of the large role played by published materials in the Hong Kong classroom, citing a previous study by Andrews (1995) in which the teacher respondents were found to spend an estimated two-thirds of class time working on examination-related published materials. Cheng suggests that a reason for this may be that the examination textbooks in Hong Kong not only provide information and activities but also suggested methods for teaching and suggested time allocations (1997).

Read and Hayes (2003) note that in 90% of cases in their New Zealand IELTS study, examination preparation books were usually employed. One feature that the three Hong Kong studies have in common is that they investigate teachers' practices shortly after the introduction of revisions to a major examination. It would be interesting to see if similar findings emerged from a study conducted once the examination's contents and standards had become familiar to teachers; that is, how much were these results a fruit of uncertainty about the examination on the teachers' part?

Alderson and Hamp Lyons (1996) indicate that at least in the situation they investigated, however, familiarity with the examination was not a variable, with many of the teachers, independently of their amount of experience of teaching towards the examination, making heavy use of examination materials. They suggest that one reason why teachers did this was that their negative attitude towards the examination discouraged them from creating their own materials.

Xiao (2002), on the other hand, has discovered that the test encourages the use of new textbooks and innovative teaching materials. Shohamy (1993) recounts a study that examined the impact of an Arabic test and found that it inspired the publication of new textbooks, which "have become, de facto, the new curriculum" (p. 10).

However, Hawkey (2006), in his study of the impact high-stakes, shows that curricula designed to match the objectives of tests for Cambridge examinations like KET, PET, and FCE, which emphasize communicative language approaches, may tend to encourage teachers to use additional materials instead of solely textbooks, from a variety of sources such as "cut-

out photographs, self-designed spider games, information gap hand-outs, audio-cassettes, (and) wall charts” (p. 143).

Tests that emphasize a communicative approach, such as the HSC often elicit a heavy reliance on test-related materials by teachers. Progeto-Lingue (2000) highlights a communicative approach, encourages the use of supplemental materials. This may be attributed to the purpose of test use. RUE and HKCEE are both high stakes and play a vital role in deciding students’ academic futures. Because of this, teachers devote more attention to assisting students to achieve high scores rather than learn real skills.

It may be, then, that in the viewpoint of teachers, using test-related materials can assist them in doing their jobs better in terms of helping students receive better scores. Tests promote a boom of test related materials and thus influence what teachers teach in the classroom, but tests may also encourage teachers to use additional materials from a variety of sources. A teacher’s choice of materials relies on a number of factors such as the purpose of the test and the availability of ready-made materials.

Washback on Test Takers

High-stakes testing affects students in various ways. Most of the findings on the effect on students relate to the social and psychological domains as revealed by the review of research carried out by (Harlen & Crick, 2003). The effect of external assessment on the identities of learners has been one of the areas of interest to researchers. There appears to be a general concurrence that students’ identities and their identification as learners are determined to a large extent by their performance on external assessments (Ecclestone & Pryor, 2003).

As students experience success or the lack of it in external assessments, they gradually come to form an identity of themselves as learners. This is because assessment regimes have the power and do encourage “a subtle, self-regulating acceptance of its purposes, practices and effects by teachers and students alike” (Ecclestone & Pryor, 2003, p. 479). The findings of Hall (2004) provide insight into how children’s identities as learners and as people are constructed through external assessment. In their interviews with students, low performing children were said to be referring to the high achieving ones as “good people”, an indication that the low performers do not consider themselves as such. Not only do children form identities of themselves and their peers, but they also put value on themselves.

Again, low performing children were found to be keenly aware of which children were most valuable to the teacher. The findings suggest that it is the high performing children who are considered as most valuable by their peers as a result of the measurement discourse that categorises and compares them on external assessments. Similarly, teachers assign their own identities to students depending on their performance on tests.

According to Hall et al. (2004), teachers position children according to how willing they are to accept the teacher’s interpretations of the demands of the external assessment. To the teachers, the ideal child is the one who is performing well on the tests and who is also supported by parents who support the school’s effort toward success on the external assessment.

The learners are the key participants whose lives are most directly influenced by testing washback. The washback influences the test takers directly by affecting learning (or non-learning), while the influences on other

stakeholders will affect efforts to promote skills when learning. The test-takers themselves can be affected by: the experience of taking and, in some cases, of preparing for the test; the feedback they receive about their performance on the test; and; the decisions that may be made about them on the basis of the test. Of the 15 washback hypotheses of Alderson and Wall's (1993), five are directly addressed learner washback. Bailey (1996) suggests students face with an important test they may participate in (but are not limited to) the following processes:

1. practicing items similar in format to those on the test.
2. studying contents and skills likely to be assessed
3. reading widely
4. applying test-taking strategies.
5. enrolling in test-preparation courses.
6. requesting guidance in their studying and feedback on their performance.
7. requesting or demanding unscheduled tutorials or test-preparation classes.
8. skipping classes to study for the test.

Learner washback has also important financial implications for pupils and their families, in terms of their access to educational opportunities. For example, Wall and Alderson examined a context in which a new national test was implemented, this time the O-level examinations administered at the end of the 11th year of education in Sri Lanka. These authors report, "a student's O-level grades, are among the most important in his or her academic career"

(Cheng, 1993, p. 231). Washback may affect learners' actions and or their perceptions, and such perceptions may have wide ranging consequences.

Hawkey (2006) used a combination of qualitative and quantitative data to investigate students' reactions to registration and placement procedures at two English-language schools in Japan. The placement procedures included a written test and an interview. He found that the students' perceptions of the accuracy of the placement.

Examination and Stress

Research has shown that students come under a great deal of stress as a result of external assessment (Harlen & Crick, 2003). The level of stress is particularly high when it comes to high-stakes assessments whose consequences are known to the students. This is what the study of Denscombe (2000) reveals about the stress associated with the General Certificate of Secondary Education (GCSE) in UK. Even though students at this level would have been used to external testing in the form of SATs, they felt particularly stressed by the GCSE as a result of the instrumental role it plays in post-modern society.

The following observation by Denscombe (2000) on the factors underlying the stress generated by the examination is revealing: ...the stress arose because success or failure at GCSEs was perceived [by students] as having a major impact on their prospects of doing well in life and on their feelings of self-worth. GCSEs were regarded as a highly significant juncture in life where, for the first time, their achievements and their potential were measured and made publicly available as a label tagged on their self-identity (p. 360).

It is apparent that it is the meaning attached to the role that examinations play in the lives of the students that creates the stress. One result of assessment related stress is that it may become unbearable for some students and cause them to lose confidence in themselves as learners. It may even drive some of them to the point of attempting suicide (Denscombe, 2000; James, 2000). It has been found that it is the low performing children who need to be encouraged and helped to perform well who are negatively affected by the examination stress. For example, Hall (2004) found that the low achieving children in their study were often gripped with anxiety and were constantly under the fear of failing the external tests. Smith (1991) also made a similar finding and notes that external tests tend to have negative emotional effects on children. The emotional instability thus created by the tests often results in some children becoming apathetic and losing interest in learning (Stiggins, 1999; Wright 2002).

Even though a large number of teachers acknowledge this emotional effect and reportedly seek ways to shield students, especially the young ones from it, Scott (2007) found that, like many other aspects of the effect of external assessments, there are contradictory views on the emotional effect on students. Some teachers and especially education officials have been found not to believe that the tests have any negative emotional effects on children (Smith, 1991).

In the case of education officials in some states in the USA who are under the pressure of public accountability, denying the emotional effect is probably the only way to justify the pressure they exert on teachers to improve test scores which are used to assess the success or otherwise of their own

policies. As an extension of Denscombe's (2000) study, Putwain (2009) also studied examination stress in students in relation to GCSE in Britain and confirms a link between assessment and stress. The assessment events comprising both the external examination and the related coursework have been found to be sources of stress to students. The stress was found to reside in the students themselves, their teachers and parents. It is noteworthy that at the level of GCSE, students are fully aware of the consequences of the results of the assessments for their future life trajectories.

Their educational and occupational aspirations have thus been found to play a major role in determining the level of stress experienced by individual students. Also, students tend to experience more stress if they feel they might disappoint themselves or significant others such as parents if they do not perform to their expectation. Significantly, it is anxiety or fear of failure that lies behind the stress experienced by students.

Putwain (2009) also found that the stress associated with assessment is heightened by pressure from teachers and parents and this comes through the "dominant discourse of achieving esteem through academic achievement". There appears to be two main ways in which students deal with examination stress. One is to give up and stop making any effort to learn. This may eventually end in the student dropping out of school (Stiggins, 1999). The other way of handling the stress is through examination preparation with the conviction that greater effort will lead to higher achievement.

Again, Putwain (2009) found that "an important form of preparation for examinations identified by students was the use of past examination questions by teachers in lesson time as part of a structured, teacher-led process

of revision” (p. 11). This importance of past questions appears to validate Resnick and Resnick’s (2009) principle that test developers should envisage the classroom and construct tests that, when they are used as the findings suggest, will result in students actually acquiring the knowledge and skills that are the true goals of the course.

Using socio-cultural activity theory as the framework for analysis, Havnes (2004) carried out an ethnographic study to investigate the impact of a high-stakes pre-university examination on students’ learning. A major finding of this study is that as the examination drew nearer, students showed more enthusiasm for their studies indicating that they were motivated to work harder than before. The findings also identified practice with past questions as a significant activity, and the researcher notes that, even though their use was intended to be an aid to learning, the past questions became the object of learning and assumed the character of a goal for the individual (p. 173).

The impact of assessment in this context is lucidly presented by Havnes (2004). The study clearly shows that assessment and examination procedures can have a “backwash” effect. The examination questions and the structure of the final assessment exercised an influence on the basis for the students’ learning. The assessment arrangements had an effect on the literature, as well as the teaching and the problems students worked on. They also supplied the premise for what the students interpreted as central to their studies.

In effect what students learn and how they learn it, what and how teachers teach, textbooks, learning materials and how the participants understand education are all mediated by assessment. Robinson and Timperley

(2000) might have been thinking about the systemic impact of assessment when they assert that for assessment to take on a new role in education, “advocacy of alternatives is mere rhetoric if one does not understand and address the forces that sustain the status quo” (p. 83).

Washback on Learning Outcomes

Teaching to the test and test taking strategies might increase students’ scores, but the score gains are not always statistically significant. Moreover, class instruction of examination-specific strategies and non-class instruction factors such as student initial proficiency, personality, motivation, confidence, and exposure of environment all possibly contribute to a score gain. A test itself does not lead to various aspects of the perceived effects. It is rather mediating factors such as teachers’ beliefs and educational backgrounds, students’ individual differences (e.g. motivation, English proficiency), and purpose of test use that play essential roles in causing test effects. It has been demonstrated that a test can result in all desired changes in teaching and learning.

Wesche (1983), points out that when tests reflect the situations, content and purpose where learners will use the language, they are likely to improve motivation. Education is a complex phenomenon and there are many factors involved in bringing about changes, like the school environment, messages from administration, expectations of teachers and students, for example. Saif (2000) argues that an analysis of the needs and objectives of learners and educational systems should be carried out as a starting point for the research in washback. Wesdorp (1982) finds there is no difference in students’ writing in quality before and after the introduction of multiple-choice tests. Hughes

(1988) reports that at a Turkish university, students' performance on the Michigan Test (a measure of English proficiency) increases after the introduction of a new test along with additional summer courses in English.

Andrews (2002) investigate the score comparisons that students receive on the UE (Use of English) oral examination in Hong Kong from 1993 to 1995. Students' scores have increased, but the score gain is not statistically significant. They claim that students' improved proficiency might have something to do with their "familiarization with the exam format, the rote-learning of exam specific strategies and formulaic phrases" (p. 220). Elder and O' Loughlin (2003) examine the relationship between intensive English language study and band score gains on the IELTS and find there are great gains in listening, but no significant progress in reading skills. In Elder and O' Loughlin's study, a range of factors are linked to improving scores on tests, such as personality, motivation, confidence and exposure.

Green (2007) finds students' initial scores instead of course length is a strong predictor of IELTS writing test score gain. In this sense, students' original proficiency plays a more important role in the resulting score gain than the time they spend in the test preparatory course. Score gain washback, as concluded from the foregoing discussion, is a complicated issue. It is difficult to detect what causes or does not cause it. Further research needs to be conducted to determine whether students have made progress because the test motivates them to study harder or if other factors such as their original proficiency, personality, motivation, and exposure have more weight in explaining the outcome.

Following the review of the literature, it seems the washback effects of high-stakes test on teachers' and students perception has not been looked at especially among business programs in the sub-Sahara countries including Ghana. So this study intends to fill such gap.

CHAPTER THREE

RESEARCH METHODS

Introduction

The study sought to examine the perceived washback of high-stakes testing on teaching and learning in senior high schools in Eastern Region of Ghana. This chapter explains how the study was conducted. It covers the research design, population, sample and sampling procedure, instruments, data collection, pilot testing, data analysis and ethical consideration.

Research Design

Research designs are set of guidelines and instructions that are followed in conducting research. The choice of research design for a particular study is based on the purpose of the study (Cohen, Manion & Morrison, 2004). For this study, descriptive survey as a research design was used in the study so that inferences could be made about characteristics, attitude and behaviour of the population with respect to the sample size.

According to Gay (1992) the descriptive survey is an attempt to collect data from members of the population in order to determine the current status of that population with respect to one or more variables. Osuala (2001), notes that descriptive surveys are versatile and practical, especially to the researcher in that they identify present needs. It is basic for all types of research in assessing the situation as a pre-requisite for inferences and generalizations. It also helps or enables the researcher to collect data on a large number of people.

Descriptive research design is useful because it can provide important information regarding the average member of a group. Specifically, by gathering data on a group of people, a researcher can describe the average member, or the average performance of a member, of the particular group being studied. Descriptive research design is highly regarded by policy makers in the social sciences where large populations are dealt with using questionnaires, which are widely used in educational research since data gathered by way of descriptive survey represents field conditions (Osuala, 2001).

Fraenkel and Wallen (2000) observed that the purpose of descriptive research is to observe, describe and document aspects of a phenomenon as it naturally occurs. They noted that in descriptive research, the events or condition either already exist or have occurred and the researcher merely selects the relevant variables for analysis of their relationship.

Descriptive survey permits the researcher to study more variables at one time than is typically possible in laboratory or field experiments. It is an efficient and accurate means of determining information about a given population. The results from surveys are provided relatively quickly, and ensure higher reliability than some other techniques. Cozby (2001) using survey, employed questionnaires to ask people to provide information about themselves, facts such as people's attitudes, perceptions, beliefs, demographics (age, gender, income, and so on) and other facts of the past or intended future behaviours. Baumgartner, Strong and Hensley (2002), also stated in their publication that, 'descriptive survey involves determining the

views or practices of a group through interviews or by administering a questionnaire' (p. 5).

However, there are difficulties involved in a descriptive survey, in that it is not in itself comprehensive enough to provide answers to question and cannot establish cause and effect relation (Osuala, 2001). Furthermore, according to Leedy (1985), "one of the most subtly and ineradicable shortcomings of descriptive survey is the presence of bias" (p. 132) and especially when one uses questionnaires. These include ensuring that the question to be answered are clear and not misleading, getting respondents to answer questions thoughtfully and honestly and getting sufficient number of questionnaires completed and returned so that meaningful analyses can be made (Fraenkel & Wallen, 2000). Despite the shortcomings identified, the descriptive survey design was used because according Fraenkel and Wallen (2000), the most advantage of the design is the potential to provide a lot of information obtained from quite a large sample of individuals.

It was there, beneficial to use the descriptive survey to find out whether there was any washback effect of high – stakes test on teaching and learning in senior high schools. The justification for the choice of descriptive survey design by the researcher was because it will help to collect data in order to determine the current status of the population with respect to one or more variables such as teachers' and students' perceptions towards high-stakes test, teachers' classroom practices etc.

Population

Amedahe and Asamoah-Gyimah (2017) explain that, population refers to the target group about which a researcher is interested in gaining

information and drawing conclusions. A research population is a large well-defined collection of individuals having similar features (Castillo, 2009). Castillo differentiates between two types of population, the target population and accessible population. The target population is the total group of subjects to which a researcher would like to generalize the results of a study and accessible population is the group of subjects that is accessible to the researcher for a study from which the study sample can be drawn (Castillo, 2009).

The target population was all the 896 business teachers and 24150 business students in Eastern region of Ghana. The study also targeted all the 65 senior high schools that offer business programme (Ghana Education Service, Eastern Regional Office, 2019). The justification for the target population was that the researcher is in the business field and had interest to explore how test- accountability pressure was influencing the teaching and learning. Moreover, it will not be feasible to target all subject teachers and all students in senior high schools in the Eastern Region.

However, the accessible population was made up of 307 business teachers and 7012 business students in 20 senior high schools in the Eastern Region of Ghana (Ghana Education Service, Eastern Regional Office, 2019).

Sample and Sampling Technique

Sample consists of a carefully selected subset of the units that comprise the population (Amedahe & Asamoah-Gyimah, 2017). It is a subset of a population to which the researcher wants to generalize the results (Sarantakos, 1998). According to Robson (2002), it is rare to be able to

contact the whole of a population in a survey, which is where sampling comes in.

Sampling is the process or technique of selecting a suitable smaller size of a population or a representative part of a population for the purpose of determining parameters or characteristics of the whole population (Kombo & Tromp, 2006). Amedahe and Asamoah-Gyimah (2017) define sampling as a ‘process of selecting a portion of the population to represent the entire population’ (p. 100). According to Cohen, Manion and Morrison (2007), the quality of a piece of research stands or falls not only by the appropriateness of methodology and instrumentation but also by the suitability of the sampling strategy that has been adopted.

The sample size was 602 and comprised of 384 students and 218 teachers. The study employed multistage sampling approach. This was necessary because the researcher employed more than one sampling techniques in the quest to reach its sampling size.

First, simple random sampling technique was employed in selecting twenty (20) senior high schools from sixty-five (65) senior high schools that read business programmes in the Eastern Region. The justification for selection of 20 out of 65 schools was that, according to Creswell (2003), one-third of a sample of a given population deems it fit for generalisation. Simple random sampling was selected based on the justification that (i) each population unit has an equal probability of being chosen, and (ii) units are chosen independently without regard to one another. By making population units equally likely to be chosen, random sampling is as fair and unbiased as

possible (Siegel, 1997) by ensuring independent selection random sampling aims at gathering as much independent information as possible.

In order to reduce bias in the selection of the sample using the simple random sampling, a table of random numbers was employed by the researcher. A list of names of Business Senior High Schools in the Region was collected from the Eastern Regional Education Office. The names of the schools were coded so that the sampling process would be devoid of bias. The codes were then written on pieces of paper and were put in a container. The slips of paper were picked one after the other without the selector looking into the pool. Once a name is selected, it was recorded and put back before a new one was picked the container was then turned to reshuffle and another name picked, recorded and put back. This was done continually until the require number of 20 schools from list of schools was selected. From each school, economics, financial accounting, business management teachers were selected.

Second, the researcher also employed purposively sampling technique to sample two hundred and eighteen (218) teachers from the twenty schools. This technique was adopted because business teachers were the right respondents to obtained rich information from. The technique helped the researcher to sample every business teacher they identify in the twenty schools.

Third, disproportionate Stratified Sampling technique was also used to sample three hundred and eighty-four (380) business students. The justification of the sampling was based on Krejcie and Morgan (1970) table of sample size determination. This sampling technique was used to address the difficulty the researcher would have encountered with stratified samples of

unequal size. In each school, sixteen (19) students were sampled. Thus, six students from SHS 1 and SHS 2 and seven students from SHS 3.

Table 1 represents list of institutions sampled.

Table 1- *Distribution of students by school, Population and Sample*

School	Population (N)			Sample (n)		
	F1	F2	F3	F1	F2	F3
Ghana Senior High School	109	160	10	6	6	7
Ofori Panyin S.H.S	140	174	157	6	6	7
Methodist Girls S.H.S	107	136	97	6	6	7
Suhum S.H. S	74	184	116	6	6	7
Pope John Seminary	87	111	141	6	6	7
Oti Boateng S.H.S	78	95	80	6	6	7
Mpraeso S.H.S	102	110	129	6	6	7
Nkwatia Presbyterian S.H.S	153	102	152	6	6	7
Pentecost S H.S	111	105	108	6	6	7
New Abirem S.H.S	60	100	106	6	6	7
Kade S.H.S	103	101	170	6	6	7
Nkawkaw S.H.S	100	97	153	6	6	7
New Juaben S.H.S	139	144	156	6	6	7
Aburi girls' S.H.S	128	101	120	6	6	7
S. D. A S.H.S	98	71	65	6	6	7
Oyoko Methodist S.H.S	78	84	72	6	6	7
Nifa Senior High School	103	122	149	6	6	7
Okuapeman S.H.S	89	135	131	6	6	7
Mpraeso S.H.S.	93	100	173	6	6	7
Adonten S.H.S	84	85	90	6	6	7
Total	2354	2327	2331	120	120	140

Table 2 represents the number of business teachers sampled in each senior high school.

Table 2- *Distribution of Economics, Financial Accounting, Business Management Teachers*

Serial	Name of School	No.	Teachers
1	Ghana Senior High school		11
2	Ofori Panyin Senior High School		10
3	Methodist Girls Senior High school		10
4	Suhum Senior High/ Technical School		9
5	Pope John Seminary		10
6	Oti Boateng Senior High School		11
7	Mpraeso Senior High School		10
8	Nkwatia Presbyterian Senior High School		9
9	Pentecost Senior High School		10
10	New Abirem Senior High School		12
11	Kade Senior High School		11
12	Nkawkaw Senior High School		11
13	New Juaben Senior High school		10
14	Aburi girls' senior high school		12
15	S. D. A senior high school		12
16	Oyoko Methodist Senior High School		13
17	Nifa Senior High School		10
18	Okuapeman Senior High School		13
19	Mpraeso Senior High School		12
20	Adonten Senior High School		12
Total			218

These schools had 101 Economics, 53 Financial Accounting, 64 Business Management teachers. In all, two hundred and eighteen (218)- (160 for male teachers and 58 for female teachers) questionnaires were distributed. To avoid multiple responses, teachers who were teaching more than one subjects for example, if a teacher was teaching Financial Accounting and Business Management was asked to indicate the subjects to which they were responding to the questionnaire.

Data Collection Instruments

The instrument used in the study was the questionnaire because it is very effective for securing factual information about practices, enquiring into opinions and attitude of the subjects. Amedahe (2005), specified that the questionnaire is widely used collection of data in educational research since if developed to answer research questions, it is very effective for securing factual information about practices enquiring into opinions and attitude of the subject. The justification for the use of questionnaire was that it is effective tool for securing information about respondents' on their perceptions, attitude and their practices.

Two separate questionnaires were developed for both students and teachers. The questionnaires were developed from the related literature. The questions were the Likert type of scales. The closed – ended type of items were selected because it has added advantage over the open-ended type of question (Amedahe, 2000),

The teacher's questionnaire made up of 44-items (See Appendix A) was in four parts. Section A of the questionnaire which looked at demographic survey was administered to obtain information on demographic variables (i.e

gender, educational qualification and subjects taught by teachers). This section was to provide background information about the kind of respondents whose views were being sought. The second part of the questionnaire which was Section B, was made up of thirteen (13) major items of same scale type. This section sought to find out the perceived washback effect of WASSCE on teachers' perception.

Section C of the questionnaire was made up of eleven (11) major questions of the same scale type. This section sought to find out the perceived washback effect of WASSCE on teachers' classroom instructional behaviour. Section D, the last section was made up of twenty (20) items. This section sought to find out the perceived washback effects of WASSCE on the curriculum as well as teaching and learning materials used by teachers

The student's questionnaire made of up 30- items (See Appendix B) was divided into four sections. Section A, which was a demographic survey was administered to obtain information on demographic variables (i.e gender and Forms of students). This section was to provide background information about the kind of respondents whose views were being sought during the study. Section B, was made up of ten (10) major questions of same scale type. This section sought information about the perceived washback effects of WASSCE on students' perception.

Section C of the questionnaire was made up of seven (7) major questions of the same scale type. This section sought information about the perceived washback effect of WASSCE on the learning in relation to content of curriculum. Section D also with 5 items sought information about perceived washback effect of WASSCE on students learning materials. Section E as the

last section sought information about the perceived washback effect of WASSCE on students' learning and techniques they employed in learning.

The internal consistency of the main study was determined using Cronbach co-efficient alpha. The co-efficient alpha obtained for the teachers' and students' instruments were .821 and .801 respectively.

Pre-Testing

To test the instrument and identify any potential for refinement, the researcher conducted a pilot-test at the Central region. The questionnaire was tested at Mfantisman Girls senior High Schools, Kwegyir Aggrey Senior High School and Saltpond Methodist Senior High school, all in the Mfantisman Municipality. The justification for considering three schools for the pre-test was that, according to Creswell (2003), a sample size of 100 respondents or more is deemed appropriate for testing an instrument especially in quantitative research. The three (3) senior high schools were chosen because the schools take part in WASSCE. Also, teachers and the students of the three (3) schools had similar qualifications and experiences as the sampled schools.

The pre-test was important because its purpose was to enhance the content validity and reliability of the instruments and to improve questions, format and the scales after careful analysis of the items based on comments passed by respondents concerning the weaknesses, clarity and ambiguity on all aspects of the questionnaire. For example, it was found after the pre-testing that, items 2 and 18 on the teachers' instruments were ambiguous and they were revised. In all, a total number of 60 teachers and 100 students were sampled for the pilot- testing.

Validity and Reliability

In order to ascertain the content validity of the instrument, Dr. Eric Anane and Dr. Asamoah Gyimah who are experts in the field of Measurement and Evaluation in the Department of Education and Psychology, read through the questionnaire to check the validity- the degree to which empirical evidence and theoretical bases to support the suitability and appropriateness of interpretations and actions based on the scores generated from the instruments. Specifically, they went through the questionnaire to check the content and face validities of the instruments.

Cronbach's Alpha was used by the researcher to establish the reliability of the instrument during the pre-test. Pavet, Deiner, Colvin and Sandvik (1991), have indicated that in terms of reliability, the most important value is the Alpha value which is Cronbach's Alpha co-efficient. Pavet et al. (1991) indicated that any scale with Cronbach's Alpha of less than 0.7 cannot be considered reliable. On the basis of that the value of .823 which was the Cronbach's Alpha co-efficient for the pre-test is above .7 and therefore be considered reliable.

To determine the internal consistency of the instrument, Cronbach Alpha (α) was computed after the pre-testing. The choice of Cronbach alpha (α) co-efficient was made on the merit of views of Mitchell (2005) who contended that Cronbach Alpha is used when measures have multi-scored items. This exercise helped to correct any ambiguities that were detected and other items that will not be relevant to the research.

The data gathered were analysed and the Cronbach's alpha established for each of the instruments as .751 (for students' questionnaires), .7821 (for

teachers' questionnaires) were obtained. Therefore, the instruments were considered reliable and appropriate to collect the relevant data to answer the questions posed. Also, Fraenkel and Wallen (2000, p. 17) posited that "For research purposes a useful rule of thumb is that reliability should be at .70 and preferably higher". With this, the instrument was said to be of good quality capable of collecting useful data for the study.

Ethical Consideration

Researchers have an obligation to conduct their study and report their findings without hurting research participants (Keyton, 2001). Therefore, the researcher sought ethical clearance from the Institutional Review Board in the University of Cape Coast to enable the researcher obtain permission from the various schools where the study would be carried out (see Appendix C).

In the research, informed consent was sought from all the research participants. Participants were given the choice to be part of the research after some clarifications concerning the study and were not forced to take part in the research. Therefore, all participants were informed and are free to agree or refuse to participate in the study.

The researcher conducted the study in a manner that protected the anonymity of the respondents. The essence of anonymity as Cohen et al. (2007) explained is that information provided by participants shall in no way revealed their identity. To protect their anonymity, respondents were not to identify themselves by names. In addition, the cover letter to the survey stated that their responses would be kept confidential and the demographic information will not be revealed. Furthermore, the questionnaire was submitted and collected in a plain envelop without any indication to the

school name. All participants were supplied with the researcher's contact information in order to allow them to ask questions about the survey or to inquire about the research findings.

I therefore addressed all ethical concerns which included; inform consent, anonymity and confidentiality. All information that was taken from different sources was acknowledged through both in-text citations and reference.

Data Collection Procedure

According to Creswell (2002), respecting the site where the research takes place and gaining permission before entering a site is very paramount in research. The researcher obtained an introductory letter from the Head of Department of Education and Psychology (see Appendix D). The introductory letter helped the researcher to get the needed assistance and co-operation from the subjects in question. Letter of introduction was delivered to the heads of the institutions to seek permission before the administration. The researcher with the help of two (2) researcher assistants administered the questionnaire in the twenty (20) schools. The questionnaire was administered between the dates of 11th to 15th March, 2019. On the 27th to 29th March, 2019; the researchers went back to collect them.

In each of the schools, the researchers explained the purpose of the study, assured respondents of anonymity and encouraged their participation. This enabled the researchers to establish the needed rapport with respondents and as well gained their co-operation. After that, questionnaires were distributed to both students and teachers and the instructions to the questionnaire and the items were carefully explained to them. Students were

given about twenty (20) to thirty (30) minutes to respond to the questionnaire and hand it over to the researchers while teachers were asked to respond to the instruments within two week and hand it over to the head of departments.

Data Analysis Procedure

All questions were of the closed-ended type and respondents were expected to respond to all the items. All items on both questionnaires were weighted as 4, 3, 2, 1 for strongly agree, agree, disagree and strongly disagree respectively. The responses to the questionnaires were coded, edited and scored for the analysis using the research questions and the hypothesis.

Research question one to five were analysed using the measures of central tendency and dispersion. The mean and standard deviation analysis were used to analyse the responses. According to Field (2005), the mean is a hypothetical value that can be calculated for any data set. It does not have to be a value that is actually observed in the data set. As much, the mean is model created to summarize a data. We can determine whether the mean is an accurate model by considering how observed values have deviated from the expected values.

The standard deviation, according to Field (2005), measures how well the mean represents the data. Small standard deviations relative to the value of the mean indicates that the data points are close to the mean and the instruments used are effective. A large standard deviation indicates the mean is not an accurate representation of the data. The outcome of the participants' views was found by summing the scores for the items and dividing them by the number of items on the Likert type scales. This formed the mean scores for each respondent.

Research Question 1

What is the perceived washback effect of WASSCE on teachers' perception?

Teachers' perceptions about WASSCE were analysed using means and standard deviations. The items on the questionnaires were assigned values on a four-point Likert scale format (4-strongly agree, 3 - Agree, 2-Disagree, 1-Strongly Disagree). The scale was a four-point Likert-type scale format, 2.5, the mid-value was chosen as an average values to which mean scores above the average of 2.5 considered respondents' agreements with the statements and scores below the average meant respondents were not in favour of those statements.

Research Question 2

What is perceived washback effect of WASSCE on teachers' classroom instructional behaviours?

Teachers' classroom instructional behaviours were analysed using mean and standard deviation. The items on the questionnaires were assigned values on a four-point Likert scale format (4-strongly agree, 3 - Agree, 2-Disagree, 1- Strongly Disagree). Mean scores above the average score of 2.5 considered respondents' agreements with the statements and mean scores below the average meant respondents were not in favour of those statements.

Research Question 3

What is the perceived washback effect WASSCE on the content of the curriculum?

The perceived washback effects of WASSCE on the content of the curriculum were analysed using means, standard deviations. The items on the questionnaires were assigned values on a four-point Likert scale format (4-

strongly agree, 3 - Agree, 2-Disagree, 1- Strongly Disagree). Mean scores above the average score of 2.5 considered respondents' agreements with the statements and mean scores below the average meant respondents were not in favour of those statements.

Section E of the questionnaire which also looked at the perceived washback effect of WASSCE on the teaching and learning materials used by teachers were also analysed using mean and standard deviation. The items on the questionnaires were assigned values on a four-point Likert scale format (4-strongly agree, 3 - Agree, 2-Disagree, 1- Strongly Disagree). Mean scores above the average score of 2.5 considered respondents' agreements with the statements and Mean scores below the average meant respondents were not in favour of those statements.

Research Question 4

What is the washback effect of WASSCE on students' perception?

Washback effect of WASSCE on students' perception was analysed using means and standard deviations. The items on the questionnaires were assigned values on a four-point Likert scale format (4-strongly agree, 3 - Agree, 2-Disagree, 1- Strongly Disagree). Mean scores above the average score of 2.5 considered respondents' agreements with the statements and mean scores below the average meant respondents were not in favour of those statements.

Research Question 5

What is the washback effect of WASSCE on students learning?

Section C of the students' questionnaire which looked at the perceived washback effect of WASSCE on the curriculum in relation to students learning was analysed using mean and standard deviations. The items on the questionnaires were assigned values on a four-point Likert scale format (4-strongly agree, 3 - Agree, 2-Disagree, 1- Strongly Disagree). Mean scores above the average score of 2.5 considered respondents' agreements with the statements and mean scores below the average meant respondents were not in favour of those statements.

Section D of the students' questionnaire which looked at the perceived washback effect of WASSCE on students' learning materials was analysed using means and standard deviations. The items on the questionnaires were assigned values on a four-point Likert scale format (4-strongly agree, 3 - Agree, 2-Disagree, 1- Strongly Disagree). Mean scores above the average score of 2.5 considered respondents' agreements with the statements and mean scores below the average meant respondents were not in favour of those statements.

Section E of the students' questionnaire which looked at the washback effect of WASSCE on students' strategies and techniques of learning were also analysed using means and standard deviations. The items on the questionnaires were assigned values on a four-point Likert scale format (4-strongly agree, 3 - Agree, 2-Disagree, 1- Strongly Disagree). Mean scores above the average score of 2.5 considered respondents' agreements with the

statements and mean scores below the average meant respondents were not in agreement of those statements.

Hypothesis

H₀: There is no statistically significant difference in the washback effect of WASSCE among SHS 1 SHS 2 and SHS 3 students.

H₁: There is a statistically significant difference in the washback effect of WASSCE among SHS 1, SHS 2 and SHS 3 students.

The hypothesis was tested at the 0.05 level of significance, using MANOVA to find out if there was a statistically significant difference in the washback effects of WASSCE among SHS 1, SHS 2 and SHS 3 students.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The purpose of the study was to investigate the perceived washback effect of WASSCE on teaching and learning of business courses in the Eastern region of Ghana. In order to achieve this aim and also to answer the stated research questions, data were gathered from business teachers and students in senior high schools.

This chapter deals with the discussion and analysis of the findings that have emerged from the data collected by means of questionnaire. Tables are provided to illustrate and support the findings. Frequency distribution tables with percentages mean and standard deviations based on the Likert scale were constructed. The presentation of results was done in the order in which research questions and the hypothesis were presented in Chapter one.

Analysis of Background Data

This section of the chapter presents the analysis of the background data of the respondents.

Gender Distribution of Teachers

Table 3 represents gender distribution of teachers.

Table 3 - *Gender Distribution of Teachers*

Gender	Frequency	Percent
Males	160	73.3
Females	58	26.7
Total	218	100

Source: Field survey (2019)

Table 3 shows that 73.3% participants forming the majority of respondents are males and 26.7% participants are females. The result therefore indicates that, majority of the teachers who participated in the study are males.

Academic Qualifications of Respondents

Table 4 represents the academic qualifications of the respondents.

Table 4 - *Academic Qualifications of Respondents*

Statement	Frequency	Percent (%)
BA/B.Sc with PGDE	25	11.5
Bachelor of Education	109	50.0
MA/M.Sc	1	.5
Diploma in Education	25	11.5
Master of Education	17	7.8
Mphil in Education	9	4.1
Bachelor of Art/ Social science	54	.5
Total	218	100

Source: Field survey (2019)

As shown in Table 4, 50% had a bachelor of Education (B.Ed) degree, 24.8% had Bachelor of Arts/Social Science (BA Arts/ SS) degree and 1.4% had Diploma in Education (Dip. Ed.). 4.1% had a Master’s degree in education (M. ED/M. Phil) and about 12% of the respondents had BA/B.Sc with PGDE. This indicates that, majority of the teachers in the three-subject areas hold a bachelor’s degree. From Table 4, each qualification is not dependent on the other. For instance, if a respondent chose bachelor of education and Mphil in Education, the two responses would be considered as one.

Subjects Taught by Teachers

Table 5 represents the subjects taught by teachers.

Table 5 - *Subjects Taught by Teachers*

Subjects	Frequency	Percent (%)
Economics	101	46.3
Financial Accounting	53	24.3
Business Management	64	29.4
Total	218	100.0

Source: Field survey (2019)

As shown in Table 5, 46.3% teach Economics, 24.3% teach financial accounting and 29.4% teach Business Management. This indicates that, majority of Business teachers teach Economics.

Gender Distribution of Students

Table 6 represents the gender distribution of students.

Table 6 - *Gender Distribution of Students*

Gender	Frequency	Percent (%)
Males	182	56.88
Females	138	43.12
Total	320	100.00

Source: Field survey (2019)

Table 6 shows that 56.88% participants forming the majority of respondents are males and 43.12% participants are females. The result therefore indicates that, majority of the students who participated in the study are males.

Distribution of Students by Form

Table 7 represents the distribution of students according to Form.

Table 7- *Distribution of Students by Forms*

Form	Frequency	Percentage (%)
Form One	92	28.75
Form Two	108	33.75
Form Three	120	37.5
Total	320	100.0

Source: Field survey (2019)

As shown in Table 7, 28.75% of the students are in Form one, 33.75% of the students are in Form 2 and 37.5% of the students are in Form three. This indicates that, respondents were fairly distributed among the three Forms of students under study.

Analysis of Research Findings

Research Question 1: What is the Perceived Washback Effects of WASSCE on Teachers' Perception in relation to Teaching?

This research question sought to find out the perceived washback effect of WASSCE on teachers' perception in relation to teaching. Three sub-themes relating to teachers' perceptions are categorised namely: a) teachers' feelings about WASSCE b) teachers' belief about WASSCE c) teachers' attitudes toward WASSCE.

To gather evidence for this, teachers were made to rate their perception about WASSCE (items 1 to 13) using strongly Agree, Agree, Disagree and Strongly Disagree. The scale was scored as (Strongly Agree =4, Agree =3, Disagree= 2 and Strongly Disagree =1). The criterion value (CV) of 2.50 was established for the scale.

Analysis of the responses shown that teachers held perceptions about WASSCE which influence their teaching. In preparing students for the examination, .

Table 8- *Mean and Standard deviation of Teachers' Perception Related to WASSCE and Teaching*

Statements	Mean	Std. Deviation
Students' high performance in WASSCE influences the student's education and future career	2.89	.824
Effective teaching is about students' high performance in WASSCE	2.64	.876
The duty of a teacher is to teach students what will make them perform in WASSCE.	2.79	.883
Feel valued as a teacher when students perform in WASSCE.	2.57	.824
Feel embarrassed if students do not perform in WASSCE.	2.69	.859
Teachers should focus much of their teaching on what will make students pass WASSCE	2.74	.868
WASSCE testing leads to better teaching.	2.49	.827
Students' high performance on WASSCE is an indication of good teaching.	2.78	.820
WASSCE brings anxiety and tension on teachers.	2.89	.644
Teaching to test'' improves students score in WASSCE	2.71	.829
WASSCE testing promotes teaching of certain subject area content over other area content.	2.77	.822
WASSCE requires test preparation that diminishes time to teach other subject content	2.73	.734
Students' scores on WASSCE provide information for teachers to improve their teaching	3.19	.725

Source: Field survey (2019)

Results in Table 8 indicated that WASSCE has an influence on teachers' perception with regard to their classroom practices. Teachers reported ($M = 2.89, SD = .824$) that students' high performance in WASSCE will influence the student's education and future career. This was followed by teachers reporting ($M = 2.64, SD = .876$) that 'Effective teaching is about students' high performance in WASSCE.' Respondents also reported ($M = 2.79, SD = .883$) that, "the duty of a teacher is to teach students what will make them perform in WASSCE". Respondents further agreed that "I feel valued as a teacher if my students perform well in WASSCE" ($M = 2.88, SD = .868$).

In support of the earlier views, respondents agreed ($M = 2.77, SD = .822$) that "WASSCE testing promote teaching of certain subject area content over others". Respondents further agreed ($M = 2.75, SD = .812$) that "Teaching to test" improved students' test score. Moreover, respondents further agreed ($M = 2.89, SD = .644$) that "WASSCE brings test anxiety and tension on teachers." In effect, the nature of WAEC testing has made teachers developed negative perception about WASSCE in relation to teaching.

Research Question 2: What is the Perceived Washback Effects of WASSCE on Teachers' Classroom Instructional Behaviours?

This research question sought to find out the perceived washback effect of WASSCE on teachers' classroom instructional behaviour. Teachers' classroom behaviours are operationally defined as teachers' actions and interactions inside the classroom. Teachers' classroom behaviours that were studied included:

- a. the teaching methods and techniques teachers use in the classroom.

- b. classroom task and activities.
- c. teachers' classroom assessment and its relationship with the content of the test.

Responses as shown in Table 9 indicate that WASSCE has an influence on teachers' classroom behaviours.

Table 9: *Mean and Standard deviations of Teachers' Classroom Behaviour Related to WASSCE and Teaching*

Statement	Mean	Std. Deviation
I teach in a way that my students understand everything.	3.25	.596
WASSCE motivates me to adopt innovative methods and techniques of teaching.	3.01	.747
I sometime change my methods of teaching to reflect WASSCE requirements	3.21	.601
Methods and techniques, I employ in teaching become more 'test-like' in the third year than second and first years.	3.41	.821
I sometime skip some topics and contents because they are unlikely to be tested in WASSCE	3.01	.819
I give more attention to contents which are likely to be assessed in WASSCE	2.71	.867
I do ignore learning tasks and activities that are not directly related to making good grades in WASSCE when teaching.	2.63	.937
I teach test-taking strategies at all the levels in order to prepare students for WASSCE.	3.44	.802
I practice and solve WASSCE past questions with students during instructional periods	3.01	.834
I give model tests in the format of WASSCE to help prepare them.	3.19	.705
I emphasize and sometimes re-teach topics which are likely to be assessed in WASSCE.	3.12	.736

From Table 9, the overall average mean of 3.40 compared to the cut-off point of 2.5-3.4 for agree indicates WASSCE influences teachers' classroom academic behaviour practices. In other words, WASSCE has made teachers orient their classroom practices with test preparation activities.

From Table 9, respondents reported ($M= 3.21$, $SD = .601$) that, "I sometime change my teaching methods to reflect the test requirement." Giving more accounts on teaching methods and techniques, teachers strongly agreed ($M= 3.41$, $SD = .821$) that, the methods and techniques they employed become more 'test-like' in the third year than second and first years. This suggests that teachers adopt methods and techniques that suit the demand of the test.

With regard to teacher classroom tasks and activities, teachers reported ($M= 3.01$, $SD = .819$) that they sometime skipped topics and contents which are unlikely to be tested in WASSCE. This suggests most teachers do not treat equally important topics. This was also followed by teachers reporting ($M= 3.03$, $SD = .820$) that, they gave attention to contents and topics which are likely to be assessed in WASSCE. Again, teachers agreed ($M= 3.03$, $SD = .820$) that they do ignore learning tasks and activities that are not directly related to students' high performance in WASSCE. Moreover, teachers strongly agreed ($M= 3.44$, $SD = .712$) that, they practised and solved more past questions with students during instructional periods.

With regard to teachers' assessment practices and its relationship with the content of the test, teachers agreed ($M= 3.19$, $SD = .736$) that, they gave model tests in the format of the test to familiarise the students. Giving more accounts on teachers' assessment practices, they agreed ($M= 2.94$, $SD =$

.812) that “they teach test-taking strategies in order to prepare students for WASSCE.”

Research Question 3: What is the Perceived Washback Effects of WASSCE on the content of the Curriculum?

This research question sought to find out the perceived washback effect of WASSCE on the content of the curriculum and teaching and learning materials use by teachers. In this study, content of the curriculum was referred to the content of teaching and teaching and learning materials used to deliver instruction. Two major issues regarding washback on content of the curriculum explored in this study were related to:

1. teachers’ arrangements and selection of teaching contents.
2. teaching and learning resources used by teachers

Table 10: *Mean and Standard deviation of the Washback Effect of WASSCE on the Curriculum*

Statement	Mean	Std. Deviation
The present curriculum does not enhance teaching and learning.	2.92	.691
I do not care about the curriculum when teaching.	2.62	.722
I feel pressurised to cover the syllabus before the final examination.	2.89	.770
If there is no WASSCE, the content of my teaching will be better from what I teach now.	2.67	.927
I am not aware of the objectives of the curriculum in each subject area I teach	2.61	.920

Table 10: Continued

WASSCE hardly permit me to give equal attention to the requirements of each topic in the syllabus.	2.55	.864
WASSCE makes me adopt “finish the syllabus” syndrome	2.82	.850
I design lessons and content around WASSCE requirement.	2.76	.761
WASSCE makes me do more lesson preparation.	2.72	.803
I attempt to teach every section in the syllabus although some sections are unlikely to tested in WASSCE.	3.09	.744
Mean of Means	2.77	.799

Source: Field Survey (2019)

From Table 10, the overall average mean of 2.77 compared to the cut-off point of 2.5-3.4 for agree indicates that WASSCE has an effect on the scope of the curriculum. The average standard deviation score ($SD = .799$) also indicated that, teachers’ responses to the items on this particular subscale were homogeneous.

Teachers reported ($M= 2.92$ $SD = .691$) that “the present curriculum does not enhance teaching and learning.” Again, teachers reported ($M= 2.89$ $SD = .770$) that they felt pressurised to cover the syllabus before the test. This was followed by teachers reporting ($M= 2.62$ $SD = .72$) that “I do not care about the syllabus and curriculum while teaching.” This might imply that with the pressure felt by teachers to cover the syllabus, they ignored the syllabus and other important learning tasks and teach contents they feel are likely to

appear in the examination. Teachers also agreed that “If there is no WASSCE, the content of my teaching will be better from what I teach now.”

In support of the earlier views, teachers reported in ($M= 2.55$ $SD = .864$) that WASSCE hardly permitted them to give equal attention to the requirements of each topic in the syllabus. Again, teachers reported ($M= 2.76$ $SD = .761$) that they designed their lessons and content around WASSCE requirement.

Perceived Washback Effect of WASSCE on Teaching Materials

Table 11 - *Mean and Standard deviation of the Washback Effect of WASSCE on Teaching Materials*

Statements	Mean	Std. Deviation
I rely on textbooks and WASSCE past questions	2.98	.774
The textbooks cover well- treated topics and exercises with a lot of WASSCE questions.	3.08	.554
WASSCE encourages me to make use variety of textbooks and teaching related materials.	3.23	.641
I recommend well-prepared textbooks with a lot of exercises following the format of WASSCE to students.	3.18	.672
WASSCE encourages me to gather information from reliable and authentic sources to prepare my own teaching materials.	3.06	.680
I do make selection of teaching and learning materials which are relevant for the purpose of passing WASSCE.	2.99	.725
I find interest teaching from text books and past questions	2.74	.802
Mean of Means	3.05	.712

Source: Field Survey (2019)

From Table 11, the overall average mean of 3.05 compared to the cut-off point of 2.5-3.4 for agree indicates that WASSCE has an influence on the teaching and learning materials used by teachers. WASSCE influences the teaching and learning materials used by teachers both positively and negatively.

Teachers agreed ($M= 2.98$ $SD = .774$) that “I rely on textbooks and WASSCE past questions.” Teachers further agreed that the textbooks they used cover well-treated topics with exercises and WASSCE questions. Giving more accounts on textbooks, respondents agreed ($M= 3.23$ $SD = .641$) that “WASSCE encourages me to make use of variety of textbooks and teaching related materials.” Moreover, teachers agreed ($M= 3.06$ $SD = .680$) that WASSCE had encouraged them to search for reliable and authentic information.

Research Question 4: What is the Perceived Washback Effect of WASSCE on Students’ perception in relation to WASSCE and learning?

This question sought to find out the perceived washback effect of WASSCE on students’ perception related to learning. Three sub-themes relating to teachers’ perceptions are categorised namely: a) students' feelings about WASSCE b) students’ belief about WASSCE c) students’ attitudes toward WASSCE.

Table 12- *Mean and Standard deviation of Students' Perception Related to WASSCE and learning*

Statement	Mean	Std. Deviation
Teachers should teach subject areas that will make us perform on WASSCE.	3.55	.822
Teachers should skip subject areas that are not examined in WASSCE	2.76	1.174
WASSCE creates an atmosphere of anxiety and tension for me	2.61	1.040
My Focus on WASSCE results encourages me to learn.	3.73	.663
I will be frustrated if I fail in the examination	2.78	.840
I will learn better if there were no tensions and anxiety to make good results in WASSCE.	3.07	.974
The pressure of WASSCE testing may result in students cheating to improve their scores.	2.87	1.009
Teachers should use WASSCE past questions in their class tests and examinations to make students familiar with the examination formats.	3.79	.531
Teachers should use WASSCE past questions in their teaching.	3.54	.686
I think our teachers should coach us how to answer WASSCE questions.	3.83	.396
Mean of Means	3.274	.816

Source: Field Survey 2019

From table 12, the overall average mean of 3.274 compared to the cut-off point of 2.5-3.4 for agree, indicated that respondents held perception about WASSCE. The average standard deviation score ($SD = .836$) also indicated that, students' responses to the items on this particular subscale were homogeneous.

Respondents strongly agreed ($M= 3.53$, $SD = .832$) that “teachers should teach subject areas that will make us perform on WASSCE”. Students also strongly agreed ($M= 3.77$, $SD = .577$) that “teachers should use WASSCE past questions in their class tests and end of semester’s examination to make students familiar with the examination’s formats”. Again, in a similar response, students strongly agreed ($M= 3.52$, $SD = .689$) that “teachers should use WASSCE past questions in their teaching”. In addition to the earlier views, students strongly agreed ($M= 3.89$, $SD = .396$) that “teachers should coach us how to answer WASSCE questions”. This might imply that students are always with the expectations that, their teachers will only teach what make them pass WASSCE.

In support of the earlier views, students agreed ($M= 2.61$, $SD = 1.039$) that “WASSCE creates an atmosphere of anxiety and tension for me.” This was followed by students’ reporting ($M= 2.78$, $SD = .840$) that, I will be frustrated if I fail in the examination. Again, students reported ($M= 3.08$, $SD = .955$) that they would learn better if there were no tensions and anxiety to make good results on WASSCE. This may suggest that the tension and pressure from WASSCE force students to demand from teachers to teach what will make them perform in the test. Respondents further reported in an

agreement ($M= 2.86$ $SD = 1.003$) that the pressure of WASSCE testing may result students in cheating to improve their scores.

However, respondents agreed ($M= 3.73$ $SD = .663$) that “My Focus on WASSCE results encourages me to learn.”

Research Question 5: What is the Perceived Washback Effect of WASSCE on Students’ Learning?

This question sought to find out the perceived washback effects of WASSCE on students’ learning. This research question looked at the washback effects on:

- a. students’ learning in relation to content of the syllabus and curriculum,
- b. students’ learning strategies and techniques
- c. learning materials used by students.

Table 13 - *Mean and Standard deviation of Washback Effect of WASSCE on Students’ Learning in relation to the Curriculum*

Statement	Mean	Std. Deviation
The present curriculum does not enhance learning.	2.95	1.015
I do not care about the curriculum while learning.	2.82	1.052
Learning comes with a lot of stress in school as I am been prepared to take WASSCE.	3.16	.860
WASSCE does provide enough room (e.g. in terms of time) for me to learn.	2.78	1.035
I skip contents and topics that are not likely to be tested in WASSCE when learning	2.78	.968
WASSCE makes me to memorise most of the things taught in class without understanding.	2.89	1.026
I feel pressurised to cover the syllabus before the final examination.	2.85	1.076
Mean of Means	2.847	1.018

Field Survey (2019)

From Table 13, the overall average mean of 2.847 compared to the cut-off point of 2.5-3.4 for agreed, indicates that WASSCE influences students' learning of the content of the curriculum. In other words, WASSCE has made students to narrow the content of the curriculum they learn. The average standard deviation score ($SD = 1.018$) indicated that, students' responses to the items on this particular subscale were heterogenous.

Students reported ($M = 2.95$ $SD = 1.015$) that the present the curriculum does not enhance learning. This was followed by students reporting ($M = 2.82$ $SD = 1.072$) that "I do not care about the syllabus and curriculum while learning". Respondents also reported ($M = 2.78$ $SD = .968$) that they skipped contents and topics that were not likely to be tested on WASSCE when learning. In a similar response, students reported ($M = 2.85$ $SD = 1.076$) that "I feel pressurised to cover the syllabus before the final examination". Moreover, students also reported ($M = 2.89$ $SD = 1.026$) that "WASSCE makes me to memorise most of the things taught in class without understanding." This may suggest that the tension and pressure from WASSCE, will makes students to adopt the rote learning approach. However, students reported ($M = 2.78$ $SD = 1.035$) that "WASSCE does provide enough room (e.g. in terms of time) for me to learn."

Table 14 - Mean and Standard Deviations of the Washback of WASSCE on Learning Materials used by students

	Mean	Std. Deviation
I rely on textbooks and WASSCE past questions when learning	3.58	.677
The textbooks cover well-treated topics with sufficient exercises and a lot of WASSCE past questions	3.20	.814
WASSCE encourages me to make use of different textbooks in each subject area.	3.56	.679
WASSCE encourages me to search for reliable and authentic information to support the textbooks	3.46	.781
I find interest studying the textbook materials and WASSCE past questions	3.42	.729
Mean of Means	3.444	.736

Source: Field survey (2019)

From Table 14, the overall average mean of 3.444 compared to the cut-off point of 3.4 and above for strongly agreed, indicates that WASSCE strongly have an influence on the learning materials used by students. In other words, WASSCE influences learning materials used by students both positively and negatively. The average standard deviation score ($SD = 0.736$) also indicated that students' responses to the items on this particular subscale were homogeneous.

Respondents reported strongly ($M = 3.56$ $SD = .679$) that “WASSCE encourages me to make use of different textbooks in each subject area.” This was followed by students reporting ($M = 3.20$ $SD = .814$) that, the textbooks

they used cover well-treated topics with sufficient exercises and a lot of WASSCE past questions. Again, students strongly agreed ($M= 3.46$ $SD = .781$) that “WASSCE encourages me to search for reliable and authentic information to support the textbooks”.

In support of the earlier views, students strongly agreed ($M= 3.58$ $SD = .677$) that, they relied on textbooks and WASSCE past questions when learning.

Table 15: *Mean and Standard Deviation of the Washback Effect of WASSCE on Students’ Strategies and Techniques of Learning*

Statement	Mean	Std. Deviation
I use rote learning approach to memorize most of the things taught in class.	2.80	.971
I give attention to topics and contents which are likely to be tested in WASSCE	3.43	.717
WASSCE makes me adopt strategies and different learning styles	3.39	.750
I practice and solve more of WASSCE past questions	3.55	.665
I ask for test-taking strategies from teachers in order to prepare us for the final examinations.	3.19	.844
I spend time learning topics and past questions that are likely to be tested in WASSCE	3.43	.766
I attend extra classes both on campus and at home to help me prepare for WASSCE.	3.18	.901
I sometimes skip classes to prepare for WASSCE	3.38	.817
Mean of Means	3.293	.803

Source: Field survey (2019)

From Table 15, the overall average mean of 3.293 compared to the cut-off point off 2.5 -3.4 for agreed, indicated that WASSCE influenced students' learning strategies and techniques they adopted to prepare for WASSCE. In other words, WASSCE has made students adopted both appropriate and inappropriate strategies of learning to achieve high performance in WASSCE. The average standard deviation score ($SD = 0.803$) also indicated that, students' responses to the items on this particular subscale were homogeneous.

Respondents reported ($M= 2.80$ $SD = .971$) that they adopted the rote learning approach to memorized most of the things taught in class. Respondents also reported that one of the strategies they employed in their learning is, they give attention to topics and contents which are likely to be tested in WASSCE. Also, students strongly agreed ($M= 3.55$ $SD = .665$) that, they practiced and solved more of WASSCE past questions. This was followed by students reporting ($M= 3.19$ $SD = .844$) that, they asked for test-taking strategies from teachers in order to prepare them for the final examinations. Moreover, students strongly agreed ($M= 3.43$ $SD = .766$) that, they spend more time learning topics and past questions that are likely to be tested in WASSCE.

Given more accounts of students' learning strategies, students reported ($M= 3.18$ $SD = .901$) that they attended extra classes both on campus and at home to help prepared for WASSCE. Finally, students agreed ($M= 3.38$, $SD = .817$), that "I sometimes skip classes to prepare for WASSCE."

Hypothesis

H₀: There is no statistically significant difference in the washback effects of WASSCE among SHS1, SHS 2 and SHS3 students.

H₁: There is statistically significant difference in the washback effects of WASSCE among SHS1, SHS 2 and SHS3 students.

This hypothesis sought to find out whether there was statistically significant difference in the washback effects of WASSCE among SHS 1, SHS 2 and SHS3 at an alpha level of .05.

The data was made up of independent variables that is; Forms of students (SHS 1, SHS 2 and SHS 3) and dependent variable; Washback effects (curriculum, students' learning strategies and learning materials used by students). The selected students were made to rate the effects of WASSCE on their learning (items 11 to 30) using Strongly Agree, Agree, Disagree and Strongly Disagrees. The scale was scored as Strongly Agree =4, Agree =3, Disagree= 2 and Strongly Disagree =1.

The multivariate analysis (MANOVA) was conducted to determine whether there are any statistically significant differences in the washback effects of WASSCE among SHS 1, SHS 2 and SHS 3 students. The independent variable, that is 'Forms of Students' included three levels: SHS1, SHS 2 and SHS 3. The dependent variables were also of three levels: curriculum and syllabus, students' learning strategies and techniques and learning materials used by students.

Table 16: *Wilk's Lambda Trace Multivariate Tests for Differences in WASSCE washback effects based on students' form*

Effect	Value	Hypothesis			Partial Eta Squared	
		F	df	Error df Sig.		
Intercept	Pillai's Trace	.162	20.169 ^b	3.000	314.000 .000	.162
t	Wilks' Lambda	.838	20.169 ^b	3.000	314.000 .000	.162
	Hotelling's Trace	.193	20.169 ^b	3.000	314.000 .000	.162
	Roy's Largest Root	.193	20.169 ^b	3.000	314.000 .000	.162
Form	Pillai's Trace	.026	1.359	6.000	630.000 .229	.013
	Wilks' Lambda	.974	1.361 ^b	6.000	628.000 .228	.013
	Hotelling's Trace	.026	1.362	6.000	626.000 .228	.013
	Roy's Largest Root	.023	2.466 ^c	3.000	315.000 .062	.023

Significant at .05 level

Field Survey (2019)

Box's M test of Equality of covariance

The result of Box's M test of equality of covariance did not violate the variance-covariance matrices assumption, $F = .724$, $df1 = 12$, $df2 = 220008.370$, $p = .729$, $M = 8.827$. This shows the assumption of homogeneity of variance-covariance ($p > .05$, see Appendix E). Since there was no violation of homogeneity of variance-covariance matrices, Wilk's Lambda multivariate test was performed. Table 16 presents the result:

The result in Table 16 showed there is no statistically significant difference on the combined criterion variables (washback effects) among students in terms of forms of students (SHS1, SHS2, SHS 3), $F(6, 628) = .974, p > .729$; partial eta squared = Wilks' Lambda Trace $V = .974$. This implied that there is no difference of washback effects of WASSCE among SHS 1, SHS 2 and SHS 3 students.

Discussion of Research Findings

This section discusses the research findings in relation to:

1. washback effects of WASSCE on teachers' perception in relation to teaching.
2. Perceived washback effects of WASSCE on Teachers' classroom instructional behaviours.
3. Perceived washback effects of WASSCE on curriculum and the syllabus.
4. Perceived washback effects of WASSCE on students' perception in relation to learning.
5. Perceived washback effect of WASSCE on students' learning practices.
6. The difference in the washback effects among SHS1 SHS2 and SHS3 students.

Washback Effect of WASSCE on Teachers' Perception in relation to Teaching

Research question one sought to find out the perceived unintended washback effects of WASSCE on teachers' perception in relation to teaching, (See Table 8). From the analysis, results indicated that teachers (respondents)

held negative perceptions about WASSCE which influenced their teaching. In other words, these negative perceptions held by teachers have been reflected in their classroom practices and was evidenced from the study that, WASSCE preparation have dominated classroom practices. These responses showed unintended effects of WASSCE on teachers' perception.

For the purpose of emphasis, teachers reported that, the duty of a teacher is to teach students what will make them perform in WASSCE, (See Table 8). Also, most teachers held the perception that effective teaching is about students' high performance on WASSCE. These findings corroborate that of Agbeti (2014), who noted that basic schools' teachers in the Greater Accra South Municipality held same perception as they prepared students for BECE.

Again, teachers held the perception that students' high performance on WASSCE will influence the students' education and future career. This supports the findings of Agbeti (2014), who noted that teachers at the basic schools in the GA South Municipality held same perception as they prepared students for BECE.

Also, teachers reported that they felt embarrassed if students do not perform in WASSCE. This finding supports the study of Gipps (2011), who asserted that, teachers develop negative feeling, perception, embarrassment, guilt, anxiety and anger when students' performance in high stakes test is below expectation.

Moreover, teachers held the perception that, they (teachers) should focus much of their teaching on what will make students pass WASSCE. This actually presupposes that, respondents held negative perceptions about

WASSCE. Thus, teachers' attention in the classroom is on students' high performance in WASSCE. The results corroborate several findings as reviewed in the literature.

First, in an empirical study by Abu-Alhija (2007) who asserted that, examinations, especially those of high-stakes influence teachers' perception, attitude and feelings and these perceptions influence teachers to alter their instructional practices.

Second, these findings support the belief of some researchers that there can be washback from examination on teachers' feelings, perceptions and attitudes, and in turn these outcomes may affect what and how teachers conduct their classroom instruction (Wall & Alderson, 1993; Shohamy, 1996; Cheng, 2005; Spratt, 2005). Again, Cheng (2005) asserted that, high-stakes testing (WASSCE in the case of Ghana) may reduce professional knowledge and status of teachers and exercise a great deal of pressure on them to improve test scores.

The literature also has it that, the dictatorship of high-stakes test (WASSCE in the case of Ghana) exercise a great deal of pressure on teachers to improve test scores, which eventually makes them develop negative feeling, perception, embarrassment, guilt, anxiety and anger (Madaus, 1988; Smith, 1991; Gipps, 2011).

In a sense whereby, teachers had developed negative perception about WASSCE and had made them directed all their classroom activities on students' performance unarguably suggests that, WASSCE has influenced the perception, feeling and attitude of teachers negatively.

Perceived Washback Effects of WASSCE on Teachers' Classroom Instructional Behaviour

Research question two, sought to find out the unintended washback effect of WASSCE on teachers' classroom instructional behaviour. Teachers' classroom instructional behaviour refers to practices pertinent to:

- a. teachers' teaching methods and techniques
- b. teachers' classroom task and activities
- c. teachers' classroom testing practices

From the analysis, results indicated that teachers altered their classroom instructional practices with test preparation activities, (See Table 9). Respondents reported that WASSCE has an influence on their classroom instructional practices. The responses of the teachers clearly indicated unintended consequences. WASSCE has made them to engage in instructional practices which much attention has been placed on students' test scores.

With regard to the teaching methods and techniques employed by teachers, respondents reported that, they adopted teaching methods which became more test-like in the third year than the first and second years, (See Table 9). This current study finding seems compatible with researchers such as Watanabe (1996), Burrows (2004) and Amengual-Pizarro (2009) who discovered that, there are large differences in the way teachers teach towards the examination skill, with some adopting much overt 'teaching to the test', as the examination approaches, while others adopted more creative and independent methods of teaching.

However, this finding seems not to agree with that of Cheng (2005), as he found that, the way teachers carried out their teaching remained more or less the same. Other studies by Wall and Alderson (1993) and Qi (2004), also found limited clear-cut evidence of the relationship between high-stakes test and teachers' teaching methods.

Respondents also reported that, in response to test demands and students' expectations, they appeared to apply traditional teaching methods, putting emphasis on topics and contents which are likely to be assessed in WASSCE. The results of this current study support that of Agbeti (2014) and Amoako (2018) who discovered BECE has made teachers engaged in test preparation sort of instruction which focused on topics that mostly appear in the test.

Again, teachers reported that, they do sometimes ignore learning tasks and activities that are not directly related to students' higher performances in WASSCE. This finding supports the study of Onaiba (2014), who discovered in his washback studies that, teachers had ignored learning tasks and activities that were specified in the syllabus because such activities did not enhance students' test score.

Teachers also reported that they orientated their classroom activities toward the demand of the test especially when the examination was pending, (See Table 9). This seasonality has also been noted in other washback studies. For instance, Wall and Alderson (1993), Watanabe (1996) and Shohamy (1996) noted in their washback studies that, as the examination date approaches, classroom instruction becomes substantially intensified.

Moreover, teachers reported that they spent too much of the instructional time dedicated to examination-related activities such as practising and solving WASSCE past questions. This suggests that students received less practice opportunities on meaningful constructs. This finding echo that of Anane, (2007) and Agbeti (2014) who noted in their studies that, teachers spent too much instructional time on examination-related materials, which they considered a limiting focus for teachers and students rather than broadening horizons.

With respect to teachers' test practices; it was found that teachers made use of class tests and mock examinations very similar in format to WASSCE, (See Table 9). This finding confirmed that of Onaiba (2014) who discovered in his washback study that, the most frequently activity carried out by teachers was the use of mock examination especially when the examination's date was due. Probably, this activity was purposed to acclimatise students to the pattern of the examination in terms of format and content.

Perceived Washback effects of WASSCE on the Content of the Curriculum

There cannot be an effective implementation of educational curriculum without efficient teaching practices.

Research question three sought to find out perceived unintended washback effect of WASSCE on the content of the curriculum. In this study, content of the curriculum was referred to the content of teaching and the textbooks used to deliver instruction. Two major issues regarding washback on content of the curriculum explored in this study were related to:

3. teachers' arrangements and selection of teaching contents.
4. teaching and learning resources used by teachers.

Respondents reported that WASSCE affects the teaching of the curriculum content daily, (See Table 10). Respondents reported that they were not aware of the objectives of the curriculum. This finding supports that of Hoque (2008), who discovered that most teachers were not aware of the objectives of the curriculum of English for Learning (EFL) in Bangladesh. As asserted by Lim (2001), the objective of the curriculum prescribes the sort of products that our educational institutions are required to produce. But if it happens that teachers are not aware of these objectives, then it poses harmful threat to our educational system.

Respondents again reported that, they teach topics they feel are likely to appear in the test, (See Table 10). This finding is consistent with that of Amoako (2018) and Anane (2007) who found out that, respectively BECE and WASSCE have made teachers to engage in test preparation practices which focus on topics that mostly appear in the test. This finding has been confirmed in the literature has a negative washback.

Respondents also reported that, they do not care about the curriculum while teaching. This confirms the findings of Onaiba (2014) who discovered that, teachers in their quest to meet expectations from school administrators, students and parents turn to ignore the curriculum. It was also discovered by Hoque (2008) in his washback study that, out of tension and pressure, teachers did not care about the curriculum of English For Learning (EFL). This implies that teachers teach whatever they think was important to teach.

The study revealed that teachers felt pressurised to cover the syllabus before the final examination. This finding was consistent with Anane (2010), who found out that, the pressure of test-based accountability has made teachers come under great pressure and tension to improve students' test score.

The study also found out that, WASSCE hardly permits teachers to give attention to the requirement of each topic in the syllabus. This finding supports that of Amoako (2018), who discovered that, BECE hardly permits basic schools' teachers to give equal attention to all topics.

Moreover, respondents reported that they designed lessons and content based on the demand of WASSCE. Such findings were also recorded by researchers in other contexts; Stecher (2002), Cheng (2005), Abu-Alhija (2007) and Choi (2008) who discovered that, the examinations investigated had the effect of restricting the curriculum to only those aspects most likely to appear in the examination. This happens when teachers put emphasis on past examination papers than the curriculum. This observation is also consistent with that of Kilickaya (2016), who found that the teachers in Turkey focused on the materials and the skills that matched the goals of the English tests. Thus, this study provides evidence that high-stakes examinations can restrict the curriculum, substantiating one further assumption made by Alderson and Wall (1993), namely: "A test will influence what teachers teach" (120).

This study has illustrated that negative washback caused some teachers to rely on the "hidden syllabus", while others narrowed the syllabus to meet the content of the examination. This view is supported by Lipsky (2010) assertion that "if teachers are assessed or even remotely evaluated on

the proportion of their charges that pass end-of-year examinations, more will pass as teachers who ‘teach to the test’.

Regarding teaching materials used to deliver instruction, it was found out that WASSCE had influenced the teaching materials used by teachers both negatively and positively, (see Table 11).

Teachers reported that they relied heavily on commercially-written and test-oriented textbook in their teaching. This finding corroborates that of Lam (1995), where he noted that, teachers become ‘textbook slaves’ and ‘exam slaves’ with large numbers of the former relying heavily on textbooks in examination classes, and of the latter relying even more heavily on past papers. Again, this finding seems compatible with those of other studies Cheng, (2005) and Shohamy, (1996) where they noted in their washback studies that, text-oriented textbooks and teaching materials were purposively published nation-wide to meet the content of the examination. Again, this finding is supported by Cheng (1997) who noted in their washback study that, there were commercially published and unpublished textbooks specifically designed to prepare students for examination in the Hong Kong Certificate of Education Examination (HKCEE) and teachers and students had heavily relied on these textbooks. The finding is also supported by the study of Han, Dai and Yang (2004) in China. Their study found out that the teachers greatly dependent on commercially produced test related materials for the preparation of College English Test (CET). This has been described in the literature as a negative washback from high-stakes test as teachers turn to relied heavily on textbook and test-oriented materials.

Teachers reported that WASSCE encourages them to make use of different textbooks in each subject area they teach, (see Table 11). This finding confirms that of Watanabe (2000) who found out that, teachers tried to be innovative during examination preparation classes by using varieties of teaching materials. This has been described in the literature as positive washback.

Teachers further reported that WASSCE encourages them to search for reliable and authentic information to support the textbooks (see Table 11). These findings corroborate that of Andrews (1995) and Lam (1995), who independently investigated content and textbook washback of UEE in Hong Kong, who asserted that, the washback effect of test on textbooks and teaching materials was a positive washback and it was evidenced by teachers creating more authentic materials from the mass media and producing meaningful learning activities.

Perceived Washback Effect of WASSCE on Students' Perception

This question sought to find out the perceived unintended washback effects of WASSCE on students' perception. From the analysis, results indicated that students held both negative and positive perceptions about WASSCE, (see Table 12). In other words, these perceptions have reflected in their learning in the sense that, students have given much attention to the demands of the test, especially where the test is very important to their future. Thus, students were demanding that teachers' classroom practices should be dominated with activities that will results in high performance in test.

For the purpose of emphasis, students were with the perception that their high performance on WASSCE will influence their chances of higher

education and future career, (Table 12). This finding confirms that of Agbeti (2014) and Onaiba (2013), where they noted in their washback studies that, students in the junior high school held the perception that, without certificate, they have no hope in future. Again, the results of this current study support that of Hoque (2008), who asserted that students' learning will be influenced if they are prompted by their perception about high-stakes test as a means of achieving high education, and anything that does not seem to support this motive is likely to be seen to students as a distraction.

Students also reported that they expected their teachers to teach subject areas that will make them perform on WASSCE, (see Table 12). Again, students reported that they expected their teachers to use WASSCE past questions in their teaching. These demands from students to teachers to teach what will make them perform in WASSCE contribute to teachers altering their teaching practices to meet the demands of the test. This current study supports the findings of Agbeti (2014) who asserted that, students come to class with a lot of expectations, expecting teachers will teach what will make them perform in the test especially in a high-stakes test environment and they turn to disapprove teachers who try to relate teaching to real-life situation.

In support of the earlier views, respondents reported that their attention on WASSCE scores make them learn without getting understanding of what they learn. This implies that students may resort to the rote learning approach which is a negative washback of a high-stakes test. This finding corroborates that of Amoako (2018), who discovered that, BECE has made teachers to encourage students through their teaching to practice rote learning without engaging students in depth-oriented form of instruction.

Respondents again reported that they could learn better if there were tension and stress to achieve high performance on WASSCE. This finding supports that of Denscombe (2000) who discovered that, General Certificate of Secondary Education (GCSE) in UK placed much stress and tension on students because the success or failure of the test was perceived by students as having a major impact on their prospects of doing well in life and on their feelings of self-worth.

Respondents further reported that the pressure from WAEC testing may make them resort to cheating to improve scores on WASSCE, (see Table 12). This finding supports the findings of Berliner (2011), who asserted that, the importance attached to success rate in high-stakes examination makes students struggle to satisfy their parents, teachers and meeting requirements for admission results students engaging in examination malpractices.

Perceived Washback Effect of WASSCE on Students' Learning practices

This question sought to find out the perceived unintended washback effects of WASSCE on students' learning practices. Washback effects were studied on the following:

- a. students' learning in relation to the syllabus and curriculum
- b. students' learning materials
- c. students' learning strategies and techniques

Students' Learning of the content of the Curriculum

This aspect of research question four sought to find out the perceived washback effects of WASSCE on students' learning in relation the content of the curriculum. The analyses indicate that WASSCE affect students' learning of the curriculum content. The responses of the respondents clearly showed

unintended consequences of WASSCE on their learning. That is to say that WASSCE has made students to engaged in test preparation sort of learning which their attentions are directed on achieving high performance in WASSCE. This may imply that they learn skills that will enhance their performance in WASSCE and leaving equally important constructs not learnt.

Students reported that they were not aware of the objectives of curriculum. This was noted in the study of Hoque (2008), who discovered, students who were being prepared for EFL were not aware of the objectives of the curriculum. Cheng (2005) asserted that students' awareness of the objectives of the curriculum help to promote a positive washback.

Respondents further reported that they do not care about the syllabus and curriculum when learning. This negative washback effect was also discovered by Hoque (2008) where he noticed students do not to care about the curriculum as they were prepared for the (EFL) examination because of their over reliance on test-related materials. This may suggest that, they practised what were important for the examination.

Again, students reported that they skipped contents and topics that were not likely to be tested on WASSCE when learning. This negative washback of high-stakes test confirms the finding of Agbeti (2014) and Hoque (2008) who noted in their washback studies that students skipped contents and topics they felt will not appear in the test because they were been influenced by test-related materials.

Perceived Washback effects of WASSCE on Learning Material used by Students

This aspect of research question four sought to investigate the perceived unintended washback effects of WASSCE on learning materials used by students. From the data analysis, results indicated that WASSCE has positive and negative washback on the learning materials used by students, (see Table 13).

Respondents reported that they relied on textbooks and test related materials (see Table 13). Most importantly, these textbooks are not prescribed by the GES. This finding confirms the study by Han, Dai and Yang (2004) in China. Their study revealed that learners were greatly dependent on commercially produced test books and test related materials for the preparation of College English Test (CET). And this has been described in the literature as a negative washback.

Again, respondents reported that the textbooks they used cover well-treated topics with sufficient exercises and a lot of WASSCE past questions, (see Table 13). This particular finding seems to be compatible with other washback studies of Cheng (2005) and Shohamy (1996) where they found out in their washback studies that, commercially and test-oriented textbooks were purposively published nation-wide which met the content of the high-stakes examination.

However, students reported that WASSCE encourages them to make use of different textbooks in each subject area they learn. This finding confirms that of Watanabe (2000) who noted in his washback study that,

teachers and students tried to be innovative during examination preparation classes by using varieties of learning materials.

They further reported that WASSCE encourages them to search for reliable and authentic information to support the textbooks. These findings corroborate that of Andrews (1995) and Lam (1995), who independently investigated content and textbook washback of UEE in Hong Kong. They discovered that the washback effect on textbooks and teaching materials was a positive washback and it was evidenced by teachers and students creating more authentic materials from the mass media and producing meaningful learning activities.

Students' Learning Strategies and Techniques

This aspect of research question four sought to investigate the unintended washback effects of WASSCE on students' learning strategies and techniques they employed as they prepare to take WASSCE. Respondents reported that WASSCE had influenced them to adopt various learning strategies and techniques. The responses of the students clearly showed unintended consequences of WASSCE on their learning. That is to say that WASSCE has made them to adopt more of inappropriate learning strategies and techniques to enhance their scores in the test.

Students reported that they do not engage in depth-oriented form of learning. Thus, WASSCE has made them to adopt the rote learning approach to memorise most of the things taught in class. This study supports that of Andrews, Fullilove, and Wong (2002), who noticed in their washback study that, with students' quest to improve on their score in Advanced

Supplementary Examination (ASE) in Hong Kong, students adopted the rote learning approach.

Respondents further reported that they give attention to topics and contents which are likely to be tested in WASSCE. According to respondents, they practice and solve more WASSCE past questions. In support of the earlier views, respondents reported that they asked for test-taking strategies from teachers in order to prepare them for WASSCE. Moreover, as one of their techniques of learning, respondents reported that they sometimes skipped classes to have their own personal studies. This present study's results confirm an empirical study by Bailey (2004) who asserted that, in a high-stakes testing environment, students will be involved practicing the following prior to the examination: practicing test items similar in format to those that do appear on the examination; asking and applying test-taking strategies; enrolling in test-preparation courses; requesting or demanding unscheduled tutorials or test-preparation classes and skipping classes to have their personal studies.

Moreover, Choi (2008) also explored strategies employed by students in a state mandated test in Korea, where she concluded that EFL testing has had a big impact on EFL education in Korea. She noted that students in the high schools were compelled to practice test-taking strategies to prepare for the examination.

Hypothesis

On the hypothesis, the result of multivariate analysis (MANOVA) indicated that there was no statistically significant difference in washback effects of WASSCE between SHS 1, SHS 2 and SHS 3 students. However, this finding contradicts that of Watanabe (2004) where it was found out that

the washback effects of the state's examination existed among grade 12 students than grade 11 students.

Chapter Summary

The descriptive statistics (mean and standard deviation), MANOVA were employed in analysing the five research questions and the hypothesis. The findings are presented as follows:

1. Teachers held negative perceptions about WASSCE.
2. Teachers have altered their classroom instructional practices by dominating classroom practices with test preparation activities.
3. It was revealed that WASSCE has shaped the instructional planning and processes of teachers where they engaged in class activities that narrowed the curriculum.
4. The study revealed that students held negative and positive perceptions about WASSCE.
5. WASSCE has made students to engage in test preparation sort of learning which has resulted in narrowing the content of the curriculum they learn.
6. Teachers and students reported that they relied on commercially textbooks and text-oriented materials which were purposely produced to meet the content of the high-stake examination.
7. Students reported that in the quest to achieve high performance in WASSCE, they adopted appropriate and inappropriate learning strategies and techniques.
8. It was also revealed that WASSCE has encouraged students to learn and teachers to be innovative in the classroom.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Overview

The study was conducted to find out the perceived washback effects of high-stakes tests (WASSCE) on teaching and learning of business courses in senior high schools in the Eastern Region of Ghana. Twenty (20) senior high schools were sampled from sixty-five (65) senior high Schools that offer business program in the region for the study. Two hundred and eighteen (218) economics, financial accounting and business management teachers made up the sample for the study. Also, 380 business students were sampled for the study.

Specifically, the study aimed at finding out the perceived washback effects of WASSCE on; teachers' perception, teachers' classroom instructional practices, the content of curriculum and teaching materials used by teachers. Also, on the part of students, the study sought to find out the perceived washback effects of WASSCE on; students' perception, students' learning strategies and techniques, students learning practices in relation to the curriculum and learning materials used by students.

Simple random sampling, disproportionate and convenient sampling techniques were used for the study. The descriptive survey design was adopted for the study. A 44-item questionnaire was the instrument used for data collection from teachers and a 30-item questionnaire was used to collect data

from students. Frequencies, percentages, Means, Standard deviation and MANOVA were the statistical tools employed.

Key Findings

The major findings for the study are:

Teachers

1. The study revealed that teachers held negative perceptions about WASSCE.
2. The study found out that test preparation activities have dominated teachers' classroom practices.
3. It was also revealed that teachers adopted teaching methods that made them taught to test.
4. The study revealed that teachers' classroom assessments were influenced with content and format of WASSCE.
5. It was found out that teachers have narrowed the content of the curriculum.
6. It was also identified that teachers relied on test-oriented materials and commercially produced textbooks flooded with WASSCE past questions.
7. The study revealed that WASSCE had encouraged teachers to teach more and also, being innovative in the classroom.

Students

1. The study revealed that students held negative and positive perceptions about WASSCE.
2. The study found out that these perceptions held by students have reflected in their learning.

3. The study also found out that students have narrowed the content of curriculum they learn.
4. It was found out that students relied on test-oriented materials and commercially produced textbooks flooded with WASSCE past questions.
5. The study also revealed that WASSCE has made students adopted appropriate and inappropriate learning strategies and techniques to improved their scores in WASSCE.
6. The study revealed that WASSCE had encouraged students to learn.
7. The study also revealed that there was no statistically significant difference of washback effects of WASSCE among SHS1 SHS2 and SHS 3 students.

Conclusion

The study investigated the perceived washback of high-stakes test (WASSCE) on teaching and learning of business courses in the Eastern Region of Ghana.

It could therefore, be concluded that, high-stakes test (WASSCE) has an influence on teaching and learning. It is evident from the study that on the whole, both teachers and students held negative perceptions about WASSCE. Most importantly, it can be concluded that, these perceptions held by teachers and students have reflected in teachers' classroom practices and students' learning. Thus, test preparation activities have dominated teachers' classroom activities. However, most teachers revealed that WASSCE had encouraged them to teach more and also, being innovative in the classroom. Again, students also revealed that WASSCE had encouraged them to learn more.

The results of the study further indicated both teachers and students have narrowed the content of the curriculum. It was also revealed that teachers adopted teaching methods that made them taught to test and students adopting inappropriate learning styles to prepare for WASSCE.

Moreover, it can be concluded that, both teachers and students relied on test-oriented materials and commercially produced textbooks flooded with WASSCE past questions. Finally, the study also revealed that there was no statistically significant difference of washback effects of WASSCE among SHS1 SHS2 and SHS 3 students.

Recommendations

The following recommendations are made based on the findings of the research for policy and practice.

1. Staff development and training should be instituted. Ghana Education Service and heads of institutions should provide in-service and staff development trainings for teachers on the effect on accountability pressure to minimise the pressure on teachers to increase test scores which may lead to narrowing the curriculum.
2. GES and heads of institutions should provide appropriate in-service training to SHS teachers on testing practices and their effects to avoid the situation of teachers spending their instructional periods preparing students for tests.
3. Teachers should be given in-service training on the relevance of providing quality educational opportunities to students. This will help

teachers to teach the broad curriculum to achieve real students' growth and learning, not just "teaching to the test" skill acquisition.

4. Educational stakeholders including MoE and GES should monitor or banned the effectiveness of commercial test-preparation materials (hidden syllabus) used for test preparations.
5. WAEC should consider other forms of testing to promote positive or beneficial washback effect on teaching and learning.

Suggestion for Future Research

The following are recommended for future research:

1. The study should be replicated to find out the washback effect of high-stakes testing on teaching and learning in other subject areas apart from Economics, Financial Accounting and Business Management in in senior high school.
2. A replication of the study in the basic school would be useful to determine the washback effect of BECE on teaching and learning.
3. A replication of the study in the university to determine the washback effect of the semester's examination on learning.

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APPENDICES

APPENDICE A

UNIVERSITY OF CAPE COAST

SCHOOL OF GRADUATE STUDIES AND RESEARCH

FACULTY OF EDUCATIONAL FOUNDATIONS

QUESTIONNAIRE FOR STUDENT

This questionnaire is developed to investigate the perceived washback effects of West African Senior School Certificate Examination (WASSCE) on the quality and quantity of teaching and learning in senior high schools. The researcher gives you full assurance that the information will be used only for the research purpose, and will be strictly kept confidential.

SECTION A: Demography of Respondents

Instructions

Please consider each of the questions carefully and indicate the answer that appropriately represents your thought. Please indicate your response to each item by ticking [] the appropriate space provided.

Section A: Demographic Data

1. Gender:

A. Male []

B. Female []

Indicate your form by ticking []

2. Form: ONE [] TWO [] THREE []

SECTION B
PERCEIVED WASHBACK EFFECTS OF WASSCE ON
STUDENTS' PERCEPTION

Put a tick mark (√) in the box next to each item, which best expresses your opinion: Key: Strongly Agree (SA); Agree; Disagree (D); Strongly Disagree

	Students' Perception about WASSCE	SA	A	D	SD
1	WASSCE will influence my chances acquiring higher education and future career				
2	Teachers should teach subject areas that will make us perform on WASSCE.				
3	WASSCE creates an atmosphere of anxiety and tension for me				
4	My Focus on WASSCE results motivates me to learn				
5	WASSCE makes me learn without getting deeper understanding of what I learn.				
6	I may be frustrated if I fail or performed bad on WASSCE.				
7	The pressure of WASSCE testing may result in students cheating to improve scores				
8	Teachers should use WASSCE past questions in their class tests and examinations to make students familiar with the WASSCE requirements				
9	Teachers should use WASSCE past questions in their teaching				
10	Teachers should coach us how to answer WASSCE questions				

SECTION C
PERCEIVED WASHBACK EFFECTS OF WASSCE ON
CURRICULUM AND THE SYLLABUS

Put a tick mark (√) in the box next to each item, which best expresses your opinion: Key: Strongly Agree (SA); Agree; Disagree (D); Strongly Disagree

	Curriculum and Syllabus	SA	A	D	SD
11	The present syllabus and the curriculum do not enhance learning.				
12	I do not care about the syllabus and curriculum while learning				
13	Learning the curriculum comes with stress in school as I am being prepare to take WASSCE.				
14	I feel pressurised to cover the syllabus before the final examination.				
15	I skip contents and topics that are not likely to be tested in WASSCE when learning.				
16	WASSCE makes me to memorise most of the things taught in class without getting deeper understanding.				
17	WASSCE does provide enough room (e.g. in terms of time) for me to learn.				

SECTION D

**PERCEIVED WAHSBACK EFFECTS OF WASSCE ON STUDENTS’
LEARNING MATERIALS**

Put a tick mark (√) in the box next to each item, which best expresses your opinion: Key: Strongly Agree (SA); Agree; Disagree (D); Strongly Disagree

	Learning Materials	SA	A	D	SD
18	I rely on textbooks and WASSCE past questions when learning.				
19	The textbooks cover well-treated topics with sufficient exercises and a lot of WASSCE past questions				
20	WASSCE encourages me to make use of different textbooks in each subject area.				
21	WASSCE encourages me to search for reliable and authentic information to support the textbooks.				
22	I find interest studying the textbook materials and WASSCE past questions				

SECTION D

PERCEIVED WASHBACK EFFECTS ON STUDENTS' LEARNING

Put a tick mark (√) in the box next to each item, which best expresses your

opinion: Key: Strongly Agree (SA); Agree; Disagree (D); Strongly Disagree

	Students' Learning Strategies	SA	A	D	SD
23	I use rote learning approach to memorize most of the things taught in class.				
24	I give attention to topics and contents which are likely to be tested in WASSCE				
25	I skip classes to have personal studies				
26	I practice and solve more of WASSCE past questions				
27	I ask for test-taking strategies from teachers in order to prepare us for the final examinations.				
28	I spend more time learning topics and past questions that are likely to be tested in WASSCE				
29	I attend extra classes both on campus and at home to help me prepare for WASSCE.				
30	I combined different text books in each subject area to have varied ideas when learning				

APPENDICE B

UNIVERSITY OF CAPE COAST

SCHOOL OF GRADUATE STUDIES AND RESEARCH

FACULTY OF EDUCATIONAL FOUNDATIONS

QUESTIONNAIRE FOR TEACHERS

This questionnaire is developed to investigate the perceived washback effects of West African Senior School Certificate Examination (WASSCE) on the quality and quantity of teaching and learning in senior high schools. The researcher gives you full assurance that the information will be used only for the research purpose, and will be strictly kept confidential.

SECTION A: Demography of Respondents

Instructions

Please consider each of the questions carefully and indicate the answer that appropriately represents your thought. Please indicate your response to each item by ticking [] the appropriate space provided.

Section A: Demographic Data

3. Gender:

C. Male []

D. Female []

4. Academic Qualification:

Diploma in education (Dip. Ed) []

Bachelor of education (B. Ed) []

Bachelor of Art/Bachelor of Social science []

BA/B.Sc with PGDE []

- Master of Education (M. ED) []
- MPhil in Education (M. Phil) []
- MA/M.Sc []
- Other (specify).....

5. Subject(s) taught:

- Economics []
- Financial Accounting []
- Business Management []

SECTION B
PERCEIVED WASHBACK EFFECT OF WASSCE ON TEACHERS’
PERCEPTION

Please tick [√] the appropriate box to indicate your level of agreement or disagreement with each statement Key: Strongly Agree (SA); Agree (A); Disagree (D); Strongly Disagree (SD)

	Statement	SA	A	D	SD
1	Students’ high performance on WASSCE influences the student’s education and future career.				
2	Effective teaching is about students’ performance on WASSCE.				
3	The duty of a teacher is to teach students what will make them perform on WASSCE.				
4	Feel valued as a teacher when students perform on WASSCE.				
5	Feel embarrassed if students do not perform on WASSCE				
6	Teachers should focus much of their teaching on what will make students pass WASSCE				
7	WASSCE testing leads to better teaching.				
8	Students’ high performance on WASSCE is an indication of good teaching.				
9	WASSCE brings anxiety and tension on teachers.				
10	Teaching to the test improves students’ scores on WASSCE.				
11	WASSCE testing promotes certain subject area content over other subject area content.				
12	WASSCE requires test preparation that diminishes time to teach other subject content				
13	Students’ scores on WASSCE provide information for teachers to improve their teaching.				

SECTION C
**PERCEIVED WASHBACK EFFECTS OF WASSCE ON TEACHERS’
 CLASSROOM PRACTICES**

For each statement, please tick [✓] the appropriate box. Where, Strongly Agree (SA); Agree (A); Disagree (D); Strongly Disagree (SD)

	Statements	SA	A	D	SD
14	I teach in a way that my students understand everything.				
15	WASSCE motivates me to adopt innovative methods and techniques of teaching.				
16	I sometime change my methods of teaching to reflect WASSCE requirements				
17	Methods and techniques, I employ in teaching become more ‘test-like’ in the third year than second and first years.				
18	I sometime skip some topics and contents because they are unlikely to be tested in WASSCE				
19	I give more attention to contents which are likely to be assessed on WASSCE.				
20	I do ignore tasks and activities that are not directly related to the purpose of passing WASSCE when teaching.				
21	I teach test-taking strategies at all the levels I teach in order to prepare students for WASSCE.				
22	I practice and solve WASSCE past questions with students during instructional periods				
23	I give model tests in the format of WASSCE to help prepare them.				
24	I emphasize and sometimes re-teach topics which are likely to be assessed in WASSCE.				

SECTION D
PERCEIVED WASHBACK EFFECTS OF WASSCE ON THE
CONTENT OF THE CURRICULUM

	Statement	SA	A	D	SD
25	The present syllabus and curriculum do not enhance teaching and learning.				
26	I do not care about the syllabus and curriculum while teaching.				
27	I am not aware of the objectives of the curriculum and the syllabus in each subject area I teach				
28	I feel pressurised to cover the syllabus before the final examination.				
29	If there is no WASSCE, the content of my teaching will be better from what I teach now.				
30	WASSCE hardly permit me to give attention to the requirements of each topic in the syllabus.				
31	WASSCE sometimes makes me adopt “finish the syllabus” syndrome				
32	I design lessons and content around WASSCE requirement.				
33	WASSCE makes me do more lesson preparation.				
34	I attempt to teach every section in the syllabus although some sections are unlikely to tested in WASSCE.				
35	WASSCE makes me improves classroom instruction and practices.				

SECTION E

	Teaching Materials	SA	A	D	SD
36	I rely heavily on textbooks and WASSCE past questions.				
37	The textbooks cover topics and exercises with a lot of WASSCE past questions.				
38	WASSCE encourages me to make use of different textbooks and teaching related materials.				
39	I design my teaching materials around the examination.				
40	I recommend well-prepared textbooks with a lot of exercises following the format of WASSCE to students.				
41	WASSCE encourages me to gather information from reliable and authentic sources to prepare my own teaching materials.				
41	I do make selection of teaching and learning materials which are relevant for the purpose of WASSCE.				
42	I find interest teaching from text books and past questions				
43	WASSCE makes me prepare more teaching and learning materials.				

APPENDICE C

ETHICAL CLEARANCE LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA



Our Ref: CES-EPB/UCC.edu/US/19-19
Your Ref:

Date: March 4, 2019

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

Secretary, CES-ERB
Prof. Linda Dzama Forde
lforde@ucc.edu.gh
0244786680

The bearer, Anim Atkins, Reg. No. EF/MEP/17/0010 is an M.Phil. / ~~Ph.D.~~ student in the Department of Education and Psychology in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. He / ~~She~~ wishes to undertake a research study on the topic:

Investigating the wash-back effects of life-stakes tests on teaching and learning of business courses in Senior High Schools in the Eastern Region.

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed his/~~her~~ proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given approval to commence his/~~her~~ study. The ERB would be grateful if you would give him/~~her~~ the necessary assistance to facilitate the conduct of the said research.

Thank you.
Yours faithfully,

Prof. Linda Dzama Forde
(Secretary, CES-ERB)

APPENDICE D

INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Telephone: 233-3321-32440/4 & 32480/3
Direct: 033 20 91697
Fax: 03321-30184
Telex: 2552, UCC, GH.
Telegram & Cables: University, Cape Coast
Email: edufound@ucc.edu.gh



UNIVERSITY POST OFFICE
CAPE COAST, GHANA

5th February, 2019

Our Ref:

Your Ref:

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION: MR ANIM AIKINS


We introduce to you Mr. Anim Aikins, a student from the University of Cape Coast, Department of Education and Psychology. He is pursuing Master of Philosophy degree in Measurement & Evaluation and is currently at the thesis stage.

Mr. Anim Aikins is researching on the topic: *“Investigating the washback effects of West African Secondary School Certificate Examination (WASSCE) on the teaching and learning of Business Courses in Senior High Schools in the Mfantseman Municipality.”*

He has opted to collect data at your institution/establishment for the Thesis work. We would be most grateful if you could provide him the opportunity for the study. Any information provided would be treated as strictly confidential.

Thank you.

Yours faithfully,


Gloria Sagoe (Ms.)
Chief Administrative Assistant
For: HEAD