UNIVERSITY OF CAPE COAST

ASSESSMENT RELEVANCE, ACADEMIC HARDINESS AND SERVICE QUALITY ON STUDENTS' SATISFACTION OF EDUCATIONAL SERVICES IN PUBLIC UNIVERSITIES IN GHANA

BY

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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.

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Supervisors' Declaration

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

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ABSTRACT

The study investigated the impact of perceived assessment relevance, academic hardiness, and service quality on students' satisfaction with educational services at the University of Cape Coast and University of Education, Winneba. The investigation was done by employing a descriptive survey design. Undergraduate regular students at the two selected universities were targeted. Students that were sampled for the study numbered 1026. However, 1019 questionnaires were received. This number represents 99.7% of the response rate. The questionnaire for the students was validated using the covariance-based structural equation modelling (CB-SEM) method. Data to answer the four research questions was analysed using means and standard deviations, whereas the six hypotheses were tested using covariance-based structural equation modelling with bootstrap samples. The study revealed that participants had a high level of satisfaction with educational services. Further, the investigation showed that service quality, perceived assessment relevance perception, and academic hardiness jointly predicted students' satisfaction with educational services. The study recommended that the Directorate of Academic Planning and Quality Assurance (DAPQA) of the University of Cape Coast and the Directorate of Quality Assurance of the University of Education, Winneba, should as a matter of necessity, work harder through policy implementation to maintain functional and transformational quality within the universities.

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DEDICATION

This work is dedicated to my grandmother, Maame Comfort Akua Tabuah.

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CHAPTER ONE

INTRODUCTION

The day when universities had a guaranteed need for their services is long gone. Institutions that were once only open to the social elite now face competition to entice students and increase their market share. While only a select few prominent universities are still free to admit students of their choice, the bulk must compete in an open market where there are many options available (Rust & Kim, 2012). Among the factors leading to such a competitive environment are the modernisation of universities and the availability of certain programmes that have high job prospects (e.g., Education) (Harvey & Williams, 2010). Such ideas as service quality, students' satisfaction, and student loyalty that did not appear in universities' strategic plans have suddenly become essential components for their survival as higher education becomes more competitive (Dennis, Papagiannidis, Alamanos, & Bourlakis, 2016; Manatos, Sarrico, & Rosa, 2017). Largely influenced by the marketing literature, research on this topic has generally focused on higher education service quality (HESQUAL) and related concepts such as student satisfaction, perceived quality dimensions, among others (Alves & Raposo, 2007; Bassi, 2019). However, the application of quality and marketing concepts such as satisfaction and loyalty to higher education is still relatively at an infancy stage, resulting in a number of knowledge gaps. Even though assessment procedures are said to drive teaching and learning (Nitko, 2001), their role in affecting students' overall satisfaction appears to be sparse. Further, an individual's ability to

withstand academic stress is shown to have a connection with high motivation toward attending classes and also learning class materials. Its impacts on students' satisfaction with educational services also appear to be minimally reported in the literature, which is the focus of this study.

Background to the Study

The major activities of universities around the world are teaching and learning to produce competent and well-prepared human resources necessary for national development (Teya, 2011). The beneficiaries of university education are the students who obtain degrees that guarantee them employment opportunities (Ekpoh, 2018). Apart from academic services, universities offer diverse services to students to enable them to succeed in their academic pursuits. Transportation, health, library, hostel, and information and communication technology (ICT) are examples of such services. Provision of services is part of the university-wide programmes aimed at ensuring sound learning by students (Materu, 2007). The learning environment should be enriched to stimulate the students' wholesome development since a comfortable student will be motivated to learn (Materu, 2007). Thus, it is imperative that whatever services are offered to students should be of the highest standard.

Students' satisfaction with service delivery in an institution is very important since the extent to which services satisfy the needs of users tells how effective and efficient that institution is (Kara & DeShield, 2004). Again, it is important to note that as learners are seen as consumers of educational services, their satisfaction is relevant to being monitored. According to Jamelske (2009), satisfied learners stand a greater chance of being committed to an academic institution as well as furthering their studies than unsatisfied ones. He also

indicates that unsatisfied learners, in most cases, do not frequently attend classes, and sometimes they end up quitting school. Exploring the students' satisfaction level helps to ascertain or unravel how far academic institutions can go in accomplishing educational goals.

Generally, universities are required to produce human resources who are versatile in varied fields of life. That is, learners should be prepared to face the current world's challenges after their exit from the academic setting. For a university to achieve an objective of this nature, learners must be prepared to appreciate the relevance of educational values and must be satisfied with such services (Tessema, Ready & Yu, 2012). According to zgüngör (2010), student satisfaction with educational services is a relevant standard to maintain because satisfied students, on average, put in more academic effort than dissatisfied students. According to zgüngör (2010), the level of satisfaction of learners within an academic environment ultimately defines the quality of graduates produced by an institution (Martirosyan, Saxo, & Wanjohi, 2014).

Literature on service quality points out the significance of school managers monitoring the satisfaction of their learners to commit themselves to the continuous enhancement of academic service (Kara & DeShield, 2004). The satisfaction of the students in academic service is an indication that an institution has met the expectations and needs of its students. However, learners get dissatisfied when an academic service does not meet their expectations. If the space between expected service and what is being delivered is wide, learners tend to give negative feedback and sometimes refuse to attend lectures because they observe that what is served is not worth their money and time (Katamei & Kiprop, 2015). Students' dissatisfaction can result in noticeable adverse or

negative reactions. They exhibit that through demonstrations, protests, or outright riots. This is to say that, for a quality educational experience and continuous quality enhancement, student satisfaction must be a priority and should be continuously monitored. Abbasi et al. (2011) argue that the students' satisfaction with academic services at universities is important if they are to acquire relevant skills and abilities needed for their individual success as well as the development of a nation. After all, the students' satisfaction with academic experience is an essential tool to evaluate the effectiveness and quality of the institution's services.

The primary goal of a university is to provide tertiary level education to students irrespective of gender. The issue of gender differences in education attainment continues to receive significant attention in the literature. In the past, men were seen to have more interest in pursuing advanced education than women, which subsequently led to a greater number of men in the formal work setting than women. There has been an increase of women in higher education, which has made it more crucial for studies on the students' satisfaction of educational services, such as gender issues. Generally, the findings of the study appear to be inconclusive on the issue of gender differences in the students' satisfaction with educational services. Some of the studies uphold that there are gender differences (Akpoiroro & Okon, 2015; Tessema, Ready & Yu, 2012); others indicate that there are none (Carey, Cambiano & De Vore, 2002; Akpoiroro & Okon, 2015; Son, Ha & Khuyen, 2018). This makes further empirical investigation of the research topic very important.

Enrollment and demand for university education will continue to rise in the coming years due to the impact of education on the economies of both developing and developed countries (Gibney, 2013). Global student enrollment increased from 19 to 29 percent between 2000 and 2010 (Haddad, 2018). Globally, student enrolment is projected to reach 262 million by 2025, as compared with 178 million in the past, that is, in the year 2010 (Gibney, 2013). Gross enrolment on the African continent will rise from 20 to 25 percent by 2025 (Gibney, 2013). The increasing enrolment can be attributable to the sophisticated requirements of today's job market, the high ambitions of parents or students, and some governmental policies and interventions. Inasmuch as enrolment of students in tertiary institutions continues to increase in the sub-regions of Africa, it is equally important that the issues of quality are looked at and addressed.

Learners, especially those in tertiary institutions, are enlightened on issues of what makes an academic environment useful and fit for purpose (Materu, 2007). This, in a way, may give a clue or exert an appreciable amount of pressure on the management of university staff to put in place quality mechanisms to meet the varied needs of students and global academic standards. If care is not taken in situations like this, issues of academic quality may be traded for higher enrolment. Hence, academic institutions that prioritise the students' satisfaction of education service as a major quality indicator may produce graduates with self-confidence and a sense of competence to face global challenges (Materu, 2007). Proactiveness on the part of management of university staff is essential because quality plays a vital role in the students' choice of a school or a programme; the employers' choice of graduates from

academic institutions to be considered for recruitment; and the parents' decision to select a particular school for the ward or advise other parents to do so.

In Ghana, the growth of the education sector (i.e., tertiary to be specific) has been phenomenal, especially from the day the nation got political independence. The figures from the National Accreditation Board (NAB) indicate that in 2007, Ghana had 17 private-owned universities. The quoted figure rose from 17 to 76 in the year 2015 (National Accreditation Board [NAB], 2015). Within the same year, the number of government-owned universities increased from five to eleven, but by the time this study was conducted, the number of public universities had increased to 14 (GTEC, 2021).

The increase in the number of universities in Ghana has provided students a lot of options to choose from when applying for a programme. In these circumstances, the recommendations of past students play a role in influencing the choice of a particular institution (Zakari, 2016). For Regessa et al. (2013) believe that understanding the students' perceptions and what pleases them is one of the surest ways the management staff of universities may deliver quality service to gain relevance in this modern academic era. Sahney (2012) also indicates that the university management staff in recent times have begun to realise the significance of the students' focus on the philosophy in the management of the academic environment. This is because the only means by which the public can assess the quality of an academic environment is through its product (i.e., students). UNESCO (2011) had earlier mentioned quality academic engagement as a fundamental human right that is expected to be the central focus of every educational organisation. But even before UNESCO's

pronouncement in 2011, the countries within the African sub-region had already made plans toward improving the quality of education within the sub-region. Historically, between 1968 and 2006, seventeen (17) regulatory bodies were formed in the sub-region to oversee the quality dynamics of tertiary schools (Materu, 2007).

For instance, Ghana established quality education systems relatively earlier; that is, quality assurance mandated institutions, such as the National Accreditation Board and the National Council for Tertiary Education (now known as Ghana Tertiary Education Commission, GTEC), were established in 1993 to police quality issues in Ghana tertiary schools (Abukari & Corner, 2010). It is important to highlight that the quality of service affects the strengths and capabilities of tertiary institutions; for instance, it helps universities to attract and retain students (Ayliff & Wang, 2006), and it is also a key success factor for an entity to reach, strengthen, and maintain its competitiveness.

Classroom assessment has often been seen as the core part of the education system, and the quality of services cannot be overemphasised. Educational assessment forms a major aspect of the teaching and learning encounter of tertiary institutions which brings about the development of human capital (Barksdale-Ladd & Thomas, 2000). An effective assessment process is thought to comprise a two-way communication system between learners and teachers. Historically, instructors have made use of tests as an instrument to highlight the learners' and guardians' certain crucial skills and knowledge that learners are able to know and do. While the bi-communication feedback takes the form of grades, the nature or type of assessment that is frequently administered to students in a school sends a message about how students should

learn certain content. For example, when students are informed that the kind of assessment that they will take will be an essay type that demands a lot of writing and thinking, the students will subsequently alter their learning from a surface learning approach to a deep learning approach (Entwistle, McCune & Walker, 2001).

There have been a great number of studies into assessment types and nature (Stiggins, 2002; Anhwere, 2009; Amedahe, 2001), but there remains a paucity of research on university learners' perceptions about the relevance of assessment procedures. As educators actively pursue classroom evaluation practices, it is often argued that assessment has an impact on the learning of students. Studies have shown that the format of classroom assessment is closely connected to the students' approaches to learning (Entwistle, McCune & Walker, 2001; Struyven, Dochy, Janssens & Gielen, 2006). The way in which a student perceives an assessment format determines the approach he/she employs to study or prepare for that kind of assessment. For example, if a student sees multiple-choice items to be relatively simpler, he/she may adopt a surface-learning approach on that test. This is to say that a student's experience of an evaluation or assessment determines the way in which he/she approaches future learning. Classroom assessment is thus logical but also scientific. It is one of the explanatory characteristics of the students' learning (Struyven et al., 2006). In this regard, knowledge of how students perceive the relevance of how they are assessed matters for the continuous quality enhancement of tertiary education.

Another variable worthy of discussion in this study is academic hardiness. In recent times, it is reported that university students do experience increased levels of stress and feelings of hopelessness due to complex academic engagement (Abdollahi, Abu-Talib, Yaacob, & Ismail, 2015). This situation, if not well managed, could affect the students' preparedness or career development to handle global work challenges. Academic hardiness is a personal resource for career development (Abdollahi & Noltemeyer, 2018; Haghighi & Gerber, 2019). Hardy people tend to see difficult and stressful circumstances as normal characteristics of existence that are worthwhile and interesting (Huang, 2015; Leslie & Hutchinson, 2018). People with a hardiness personality possess a positive mindset that enables them to focus on the good aspects of life rather than the life challenges (Maddi & Khoshaba, 2005).

Hardiness has to do with the resilience of learners to failures in academic pursuits. That is, hardy learners demonstrate a willingness to pursue challenging academic work, devote themselves to academic tasks, and also see themselves as having control over their academic achievements (Benishek & Lopez, 2001; Maddi, Harvey, Khoshaba, Fazel, & Resurreccion, 2009). Hardy people have control over the events of their lives in terms of the events they choose and how they respond to problems (Maddi, 2005). Studies around hardiness in the academic environment have proven to be demanding and stressful for learners. In view of the stressful nature of recent academic environments, policy-makers and researchers have continuously advocated for improved academic environments that support creativity and innovative learning. This is because as learners reach out to their full capabilities, which has an impact on the

development of relevant career skills for the world of work (Maddi & Khoshaba, 2005).

Stress within the academic environment in recent times has been the focus of investigation for many researchers. Once again, studies on stress have largely been centred on the link between academic stress and the learners' achievement (Heikkila, Lanka, Niemine & Niemivitra, 2012). The idea behind the researcher's interest in academic stress among university learners bears the recognition that immoderate stress damages academic achievement and may bring about a diminished quality of academic experience. Hardy attitudes in learners are desirable because a hardy personality facilitates the process of changing stresses to pleasant outcomes in the form of enhanced performance criteria such as innovativeness, creativity, wisdom, fulfilment, and good mental health (Maddi, 2006).

Individuals with strong hardy attitudes exhibit an activity pattern of coping with stressful situations (e.g., completing a final-year research project, meeting course work deadlines, examinations, etc.) by pursuing them (rather than denying them), striving to change them from potentially disastrous forms into welcoming opportunities (Maddi & Khoshaba, 2005). Hardiness has been found to have a positive relationship with creativity and retention rate among college students (Lifton, Seay, & Bushke, 2000), as well as an inverse relationship with a variety of health complaints and academic stress among undergraduate students (Hystad, Eid, & Johnsen, 2009). Cole, Field, and Harris (2004) argue that learners who have hardy attitudes have high motivation toward attending classes and also learn more from class materials than their counterparts who have less hardy attitudes. They further propose that

characteristics of hardiness and learning motivation often interact to predict the learners' affective reactions. Sheard and Golby (2007) extend the debate about the three hardiness attitudes and their behavioural manifestations to the tertiary education context.

Classroom assessment, when well-constructed, becomes useful (i.e. relevant) in measuring important aspects of a course and also in measuring the appropriate level of a student's knowledge (Fisher & Frey, 2007). In order for students to have a better outcome from these assessment activities, which are often in and of themselves stressful and challenging, one must be hardy. That is to say, students must have a hardy attitude toward academic life in order to achieve good results (Lifton, Seay, & Bushke, 2000). The synergy between hardiness and usefulness of assessment in terms of driving students' learning to achieve a better output becomes an important indicator of an institution's fitness for purpose (i.e., service quality) (Ekinci, Prokopaki, & Cobanoglu, 2003). In the long run, there appears to be a relationship among the three predictor variables (i.e., assessment relevance, academic hardiness, and quality services) that may interact to affect the satisfaction level of students.

Clearly, within higher institutions of learning, particularly universities, students' perceptions about services provided that span the spheres of functional and technical services may significantly contribute to their satisfaction (Rowley, 2003). Again, it could also be envisaged that the perception that students have about the relevance of the assessment procedures used by lecturers in the university may also matter in quality service evaluations (Parri, 2006). When students perceive that the assessment tasks they have been subjected to over the years in university do not in any way help their learning or, for that matter,

prepare them for the field of work, they may be dissatisfied. In addition to the services and the students' perception about assessment tasks' relevance, academic hardiness, which predicts the ability for the students to cope and turn the pressures of the academic environment to what they want to a larger extent, may contribute to the overall satisfaction of the students. The knowledge of an integrative model that highlights the interactive effects of the foregoing variables may give an understanding of the students' satisfaction, which is an indicator of quality service delivery in 21st century universities. This current study therefore sought to explore the impact of perceived assessment relevance, service quality, and academic hardiness on the students' satisfaction within a quality context.

Statement of the Problem

Student satisfaction is relevant, especially for universities, because of its effect on student motivation and retention (Helgesen & Nesset, 2007). Studies done on students' satisfaction have also shown that it helps to provide management with information to improve services as well as the image of the institution (Malik, Danish & Usman, 2010; Rowley, 2003). Again, to establish long-term relationships with students, it is necessary, first of all, to be able to obtain their satisfaction and understand the factors that influence them, since the absence of satisfaction in a student can have baneful consequences for both the university and the student (Popli, 2005; Richardson, 2005). It could cause bad student performance (Walther, 2000), make students quit or transfer (Alves & Raposo, 2009), and have negative word-of-mouth influence that might damage future applications (Walther, 2000). Thus, it is the responsibility of the

institutions of higher education to understand the formation process of student satisfaction and also to find reliable forms of measuring satisfaction.

The issue of students' perception of quality services, assessment relevance, and their academic hardiness is of prime concern. Service quality has been shown to have a significant relationship with students' satisfaction of educational services (Kundi et al., 2014). Apart from service quality connection with students' satisfaction, academic hardiness plays a role in the progressive pursuit of academic tasks. Academic hardiness in this regard has been shown to be a predictor of performance effectiveness in students (Maddi, 2002; Maddi, Harvey, Khoshaba, Fazel, & Recurreccion, 2009). Further, there is evidence to show that students' perceptions of the relevance of assessment (e.g. assignments, projects, exams, etc.) being provided by their instructors affects their overall satisfaction (Dalton & Denson, 2009). The foregoing studies point to the fact that, empirically, there appear to be connections among predictor variables (i.e., service quality, academic hardiness, assessment relevance) and the criterion variable (that is, satisfaction with educational services) that work together in an academic setting.

Examining critically the literature, it appears that some studies have investigated students' satisfaction and the variables that affect it (Amoako & Asamoah-Gyimah, 2020; Stukalina, 2014; Tuan, 2012; Encabo, 2011); quality services (Seniwoliba, 2014; Asante, 2015; Zakari, 2016; Kwarteng, 2020; Mattah, Kwarteng & Mensah, 2018); students' perception of assessment (Nugba & Quansah, 2020; Quansah & Asamoah, 2019) and hardiness (Dodoo & Surienty, 2021), within the Ghanaian context. Further, considering the literature on the issue of students' satisfaction, apart from Amoako and

Asamoah-Gyimah (2020). which was conducted in Ghana, most of the studies were done in other jurisdictions. The study by Amoako and Asamoah-Gyimah (2020) found that the instructional, technological, and psychological environments contribute to students' satisfaction with education services. Even though the study measured satisfaction of services, the measurement instrument did not incorporate the ideas of how the variables studied affect students' acquisition of relevant skills. What were the students satisfied with then? Is it just the existence of technology, a warm school environment (psychologically), and serene lecture halls? These are credible questions with no readily available answers.

Concerning the issue of service quality, most of these studies (Seniwoliba, 2014; Asante, 2015; Zakari, 2016; Kwarteng, 2020; Mattah, Kwarteng & Mensah, 2018) made use of the Service Quality (SERVQUAL) instrument proposed by Parasuraman et al. 1988 in the measurement of quality, which is hugely criticised for its inefficiency in incorporating transformational quality, which is a relevant variable for quality measurement in an educational context. Furthermore, there appears to be no research on academic toughness in Ghana. The only investigation done (Dodoo & Surienty, 2021) is on the hardiness personality disposition among miners, which is conceptually different from the academic hardiness of students. The latter is about the propensity to manage and withstand the consequences of stress within the academic setting, whereas the former is the trait that directs the manner in which individuals think and behave universally. Further critical look into the literature appears to indicate that no single study has consciously investigated the combination of the

variables (i.e., service quality, academic hardiness, and assessment relevance perception) effects on students' satisfaction with educational services.

My personal experience as a student at the University of Cape Coast (UCC) during the time I was doing my first degree gave me the impression that most undergraduate students perceived UCC assessment procedures to be extremely strict and difficult relative to what was done in other traditional universities in Ghana. Some undergraduate students that I encountered in that period had the perception that the way students are assessed nowadays does not promote effective learning of important lifelong skills. This kind of thinking gave me the curiosity to investigate the students' perception of the relevance of assessment. Further, studies done within the UCC (Owusu, Akoto, & Abnory, 2016; Boakye-Yiadom, 2021) and UEW (Bampoh-Addo, 2017) indicated that students were dissatisfied with the services that were being offered, hence the need to consider these two institutions. Beyond the value of the main-effect models involving service quality, perceived assessment relevance, and hardiness, an integrative model that captures their interactive as well as additive effects may suggest an advanced framework for understanding and predicting what actually satisfies undergraduate students. The study therefore sought to examine the impact of perceived assessment relevance, service quality, and academic hardiness on the students' satisfaction within a quality assurance framework.

Purpose of the Study

The main purpose of the study was to examine indicators (i.e., perceived assessment relevance, service quality, and hardiness) of the students'

satisfaction in quality educational service delivery. Specifically, the study sought to investigate the:

1. Students' satisfaction level of educational services.
2. Students' academic hardiness level.
3. Students' perception about universities assessment relevance.
4. Service quality level of the selected universities as reported by the students.
5. Service quality impact on the students' satisfaction.
6. Academic hardiness impact on the students' satisfaction.
7. Perceived assessment relevance impact on the students' satisfaction.
8. Mediating effect of academic hardiness on the connection between the students' satisfaction and service quality.
9. Differences between male and female students' satisfaction of educational services.
10. Combine effect of assessment relevance, hardiness and service quality on the students' satisfaction of educational services.

Research Questions

The under listed research questions were crafted to guide the study:

1. What is the satisfaction level of students for educational services?
2. What is the level of academic hardiness for students of the selected universities?
3. What is the perception of students about the assessment relevance of their university?
4. What is the perception of students about service quality of the universities?

Research Hypotheses

1. H_0: Service quality does not significantly predict the students' satisfaction of educational services.

   H_1: Service quality significantly predicts the students' satisfaction of educational services.

2. H_0: Academic hardiness does not significantly predicts the students' satisfaction of educational services.

   H_1: Academic hardiness significantly predicts the students' satisfaction of educational services.

3. H_0: Perceived assessment relevance does not significantly predicts the students' satisfaction of educational services.

   H_1: Perceived assessment relevance significantly predicts the students' satisfaction of educational services.

4. H_0: Academic hardiness does not significantly mediate the relationship between service quality and the students' satisfaction of educational services.

   H_1: Academic hardiness significantly mediate the relationship between service quality and the students' satisfaction of educational services.

5. H_0: There is no significant difference between male and female students on satisfaction of educational services.

   H_1: There is a significant difference between male and female students on satisfaction of educational services.

6. H_0: Assessment relevance, hardiness and service quality will not jointly predict the students' satisfaction of educational services.

H_1: Assessment relevance, hardiness and service quality will jointly predict the students' satisfaction of educational services.

Significance of the Study

The importance of the research findings is enormous, especially in the context of serving as a spring board in promoting quality education in Ghana. The findings would be beneficial to the Ghana Tertiary Education Commission (GTEC), Directorate of Academic Planning and Quality Assurance (DAPQA) of UCC, Directorate of Quality Assurance (DAQ) of UEW and other traditional universities in the country. The investigation's findings would provide evidence on how to improve student satisfaction by focusing on assessment modules, student hardiness, and the overall quality of services provided at the university. This would assist the aforementioned stakeholders in improving existing policies in order to help solve the problem of increasing student dissatisfaction with educational services.

The study would also benefit theory on the issue of service quality. The outcome of the study would be empirical evidence (especially from the African context) that would support the soundness of the Gronroos service model that places emphasis on both functional and transformational quality in the conceptualization of educational service quality. The theoretical position of this study would serve as a guide for future researchers that may be interested in education service quality.

Moreover, information about the nature of students with respect to their resilience or academic hardiness would be understood by academic counsellors relative to the students' capacity to manage stress within the academic environment and the further psychological services that are needed on

university campuses to serve as a buffer between stress and the students' quality academic experience.

The study would not only contribute to knowledge in the quality promotion literature about the role of students in enhancing educational quality but would also serve as an initial evaluation of education quality using the "students' perception of the assessment relevance" as a relevant factor. This study has contributed to knowledge by adding to existing literature in educational service quality.

Delimitations

The study focused solely on the effects of service quality, perceived assessment relevance, and academic hardiness on the students' satisfaction. Geographically, the study made use of undergraduate education students within two public universities, that is, the University of Cape Coast and the University of Education, Winneba.

Limitations

In the conduct of this study, only two universities were sampled; that is, the University of Cape Coast and the University of Education, Winneba. As a result, caution should be exercised when extrapolating the study's findings beyond the competition. Again, in the measurement of satisfaction of educational services, even though a standardised scale was adapted, the items may not have covered all the facilities and services (even though relevant ones were covered) that are in the two schools. Caution should also be exercised when the findings are used for purposes of generalization.

Definitions of Terms

Students satisfaction: The overall contentment of students for academic services.

Educational services: Educational services are those services that support teaching and learning and the functioning of an academic institution.

Service quality: Students perception on how well educational services provided by a university meets or exceeds their expectation.

Academic hardiness: The personality style of a student allows them to see stressful academic life tasks as temporary and to also see life changes as a usual aspect of human endeavor. Academic hardiness is an attitude that gives the motivation and the courage to do the difficult and strategic task of changing stressful situations from worse to better.

Perceived assessment relevance: Students' views on the assessment framework of their institution and how it contributes to their overall learning and moulding for the world of work. In other words, it also refers to the utility of assessment procedures of a particular institution.

Organization of the Study

The study has been organised into five chapters. Chapter One discusses the introduction, which highlights the background to the study, the research problem, and the purpose of the study. The research questions have been stated, along with the significance and delimitation of the study. Chapter Two reviews the literature related to the study. The review involves empirical studies and conceptual definitions. Chapter Three describes the methods employed in the conduct of the study. This involves the research design, population and sampling procedure, the research instrument, the pre-testing procedure, and the

procedure for data collection and analysis. In Chapter Four, the findings are discussed, while Chapter Five summarises the study and provides conclusions. Recommendations are given in the last section of the chapter based on the findings of the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter reviews the earlier studies related to the stated questions of the study. Among the issues discussed include the conceptual, theoretical and empirical evidences surrounding the study topic. The areas reviewed include the following:

1. Theoretical review:
    i. Gronroos perceived service quality model
    ii. Expectancy-disconfirmation model
2. Conceptual definitions/overview
    i. The concept of service quality in high education
    ii. Measurement of service quality in high education
    iii. Overview of quality assurance
    iv. Quality assurance in Ghana's higher education
    v. The concept of student satisfaction of educational services
    vi. The origin and concept of academic hardiness
    vii. Measurement of academic hardiness construct
    viii. The concept of assessment
    ix. Assessment practices in high educational institutions
    x. Students' conception of assessment relevance
3. Empirical review
    i. Students' satisfaction level of educational services

ii. Differences in the male and female students' satisfaction of educational services

iii. Institutional image impact on the students' satisfaction of educational services

iv. Students' academic hardiness

v. Academic hardiness impacts on the students' satisfaction of educational services

vi. Mediating effect of academic hardiness in the correlation between service quality and the students' satisfaction

vii. Service quality impacts on the students' satisfaction

viii. Students' conception of assessment relevance

ix. Perceived impact of assessment relevance on the students' satisfaction

Theoretical Framework

This section discusses the theoretical underpinnings of the study. As part of the write-up, theoretical implications are also highlighted. The theories discussed include Gronroos Perceived Service Quality Model and Expetancy-Disconfirmation Model.

Gronroos Perceived Service Quality Model (Gronroos, 1984)

Gronroos (1984) proposed a model that comprises three separate dimensions: image quality, functional quality, and technical quality. This model accepts both functional quality together with image quality as suggested by (Parasuraman et al., 1988), which gives a more realistic picture of today's unsteady global market than models that only show functional quality (Nimako, Azumah, Donkor, & Veronica, 2010). Nimako et al. (2010) opined that

customer assessments of what he/she feels is the performance of an organisation's service provided against his/her anticipated service quality reflect a standard evaluation of service quality.

Technical quality refers to what the consumer actually obtains as a product of his or her engagement with the service provider (Nimako et al., 2010; Stromgren, 2007). The result quality received by a consumer or a client forms a core part of the quality experience and can be assessed objectively by consumers of the service as it gives technical solutions to a client's problems (Nimako et al., 2010). Stromgren (2007) argues that clients of organisations may encounter difficulty in evaluating technical aspects of the service provided; however, they may depend on other indicators of quality characteristics that are connected with the functionality of a service (i.e., functional dimension). For the functional dimension, the focus is on services provided by the organisation (Stromgren, 2007). The functional side of quality is an interconnected process that depicts how the clients experience and receive the service provided (Nimako et al., 2010). Whereas clients are able to assess technical quality, functional quality is often difficult to objectively measure. The clients' views on the functional aspects of quality are often subjective (Stromgren, 2007). The functional aspect of quality is a product of technical quality embraced by customers.

The implication of this model to the current study has to do with the fact that in recent times, the conceptualization of service quality in education focuses on both technical and functional (transformational) quality as opposed to the earlier definition that laid emphasis on only functional service quality. Within the education enterprise, it is more appreciable that service quality measurement captures both transformative and functional aspects (Teeroovengadum et al.,

2016). As functional aspect of quality relates to the process of service delivery (Brady & Cronin, 2001), transformative aspect of quality in education, as coined by Harvey and Green (1993), refers to the technical component of the quality of service delivered (Teeroovengadum et al., 2016).

Having the aforementioned in mind, the weakness of previous studies (which this current study sought to address) is that the idea of service quality that captures transformative aspects has been abandoned in most of the empirical studies on service quality evaluations as well as in student satisfaction frameworks for tertiary educational settings. However, it is quite obvious that higher educational institutions are established for the purpose of transforming learners through instructional activities (Leibowitz & Bozalek, 2015). This current study therefore aligns itself completely with the Gronroos model and measures service quality by considering the technical and functional (transformational) dimensions of service delivery of the selected universities in Ghana.

Expectancy-Disconfirmation Model (Oliver, 1977)

The expectation model (commonly referred to as the expectancy-disconfirmation model) is one of the most commonly used models, especially in studies relating to the satisfaction of organisational customers. As indicated in the model, a customer's satisfaction or dissatisfaction comes as a result of a person's comparison of an organisation's output (i.e., either service or product) with an expected standard of output. As suggested by the model, the expected output is the person's predetermined standard. The model proposes three outcomes that occur in the context of customer expectations and the service(s) provided by the organization.

Positive disconfirmation occurs as the organisations' outcome (i.e. service or product) is seen to be good compared to the anticipated expectations of the customer. It is obvious that in this instance, customers would be satisfied. When the organisational outcome (i.e. product or service) is seen to be exactly the same as the customer(s), there is zero disconfirmation.In this instance, the customer(s) would be delighted. Negative disconfirmation is the final step that happens when an organisational outcome (i.e., product or service) is perceived to be less than expectations. Most definitely, negative disconfirmation makes customers unhappy or dissatisfied. According to Oliver (1993), satisfaction is a continuous process which is experience and situation specific. In a broader light, satisfaction can be seen as customers' being fulfilled, and this happens within the continuum of a customer having an expectation and, at the end, experiencing the organisational performance.

Within the discussion around the students' satisfaction with educational services, the expectancy-disconfirmation framework has been counted as the most commonly used model (Ramos & Unda, 2016). The framework indicates that for a student to be satisfied, it is not only dependent on the academic institution's services provided but also on the already anticipated expectations of that student. For example, if an academic institution's service(s) exceeds a student's expectations, this results in a positive confirmation, and the student is satisfied in this scenario. Therefore, the diverse expectations of students for the services of academic institutions tend to define the differences that exist in the students' satisfaction with educational services.

The current study accepts this model because students are seen as customers of educational services with defined expectations. Whenever the university tends to produce quality service that exceeds the students' expectations, positive disconfirmation is attained (Ramos & Unda, 2016). Also, negative disconfirmation is present when the services provided tend to be less than the expectations of students. When the services provided by the academic institution are exactly what was expected, the result is zero disconfirmation (Ramos & Unda, 2016). In this global, competitive, ever-changing educational context, students enter academic institutions with expectations that range from personal growth, social and moral growth, as well as the acquisition of relevant skills. These expectations of students must be the focus within which academic institutions operate to achieve a positive disconfirmation.

The Concept of Service Quality in High Education

Educational service quality has been defined in several ways by several people. Peters and Waterman (1982) define educational service quality as excellence in education. This definition actually reflects the totality of achieving every objective of the higher education institutions. Peters and Waterman's (1982) definition was in line with an earlier definition by Gilmore (1974) and Crosby (1979), who opined that service quality in tertiary institutions has to do with aligning educational outcomes to planned educational goals. Essentially, for the latter definition, service quality is seen as meeting requirements or goals, which may also be seen as an attainment of excellence. For Parasuraman, Zeithaml and Berry (1988), they see service quality in higher education as meeting or exceeding customer (i.e., students) expectations of education. In more recent times, service quality has been conceptualised from the perspective

of general quality definitions. This is to say that service quality is generally seen as the willingness of the service organisation to achieve or surpass the customers' expectations (Zeithaml & Bitner, 2003; Zeithaml et al., 2002).

Studies focusing on issues of service quality in higher educational institutions are significantly few (Beaumont, 2006). Traditionally, many scholars have instead turned their attention to the quality of commercial service organisations (Sultan & Wong, 2010). Higher educational institutions are increasingly becoming aware that they form part of the service industry, and in recent times, they have been seen paying more attention to the student's satisfaction as they face an increased level of competition among themselves as academic institutions (DeShieds, Kara & Kainak, 2005). DeShield et al. (2005) further suggest that it is crucial for universities to adopt market-focused strategies or principles often utilised by general profit-oriented organisations. However, in the foregoing suggestion, Hemsly-Brown and Oplatka (2006) agree to the use of general profit-making principles for the purpose of universities gaining competitive advantage. Globalisation, with its ever-increasing technology and knowledge, has made academic institutions competitive in nature; hence, the need for higher education institution managers to continuously monitor the quality of services they render to their students and the community (Kara & DeShield, 2004).

As students' enrolment in tertiary institutions increases, such phenomena as student satisfaction and service quality, that initially were not part of the cooperative arrangement of tertiary institutions, have recently become crucial considerations for the academic institutions' competitive existence (Dennis et al., 2016; Manatos et al., 2017). In higher educational

institutions, service quality is suggested to be made up of both transformative and functional sections (Teeroovengadum et al., 2016). In the discussion of educational service provision, as functional quality refers to the instructional practises and related activities (Brady & Cronin, 2001), transformative quality is seen as the outcome of educational experience (Teeroovengadum et al., 2016). That is, what the person becomes after enrolling in an academic institution. Critical observation of the quality education literature shows that a majority of the studies done on the issue of service quality and or students' satisfaction in tertiary institutions largely neglected the transformative service quality which is highlighted in this current study. This current study highlights the issue of transformative quality because the ultimate aim of tertiary institutions is to transform their students through instructional activities (Leibowitz & Bozalek, 2015). In a way, the market-focused agenda of higher education institutions results in various positive outcomes, such as better financial performance and an increase in market share. However, so much attention on financial acquisition is detrimental to learning or educational processes and important output, such as the transformation of learners.

Measurement of Service Quality in Higher Education

In the educational environment, the measurement of educational service quality has hit the rocks and become more of an issue of intense controversy, and this is probably because of the difficulty in conceptualising the term "quality," especially within the educational enterprise (Zakari, 2016). In the past decades, several models have been proposed by scholars in an attempt to measure service quality within service-providing organisations, which include educational institutions. The predominant ones are SERVQUAL, developed by

Parasuraman, Zeithaml, and Berry (1988), and Service Performance Scale (SERVPERF), developed by Cronin and Taylor (1992).

The SERVQUAL model assesses quality by noting the similarities between the students' or customers' views on the organisation's current performance and their anticipated performance, whereas SERVPERF acknowledges only the students' or clients' views on the organisation's performance. One major limitation of the predominantly used models above is that they both neglect the 'transformative quality' dimension and pay only attention to the functional aspect of quality. However, most empirical studies have argued that recent conceptualisations of service quality in education must capture both functional and transformative (technical) dimensions (Alves & Raposo, 2007; Zachariah, 2007; Teeroovengadum et al., 2016). To address the foregoing limitation, this current study made use of the Higher Education Service Quality (HESQUAL) scale developed by Teeroovengadum et al. (2016), which serves the needs of recent conceptualisation of quality. The HESQUAL model is ideal for this present study because it captures the functional and transformative dimensions of quality service measurement as two theoretically separate concepts and further assesses the unique impact of the model on the students' satisfaction.

Overview of Quality Assurance

In the early 1980s, quality appears to have been borrowed from a similar but commercial industrial environment to the domain of higher education context (Newton, 2002). Coming up with a definition of quality that reflects education practises in tertiary schools is a difficult task since quality is a rather controversial and loosely defined concept. In the literature, there is no unitary

conceptualization of the term quality that is universally accepted. Tammaro (2005) argues that quality, as a term, represents a value judgement, which calls for different interpretations from different stakeholders, such as employers, governments, administrators, lecturers, students, etc. As in the case of "beauty", quality is subjective, an issue of individual judgement (Doherty, 2008). According to Mishra (2007), as cited in Seniwoliba (2014), the term (i.e., quality) has four cardinal points around which the entire term revolves.He suggests that quality can be seen as an absolute, which is often considered as the apex point or standard. Again, the term quality may also be seen as relative. In this light, it is described and used in relative terms. Moreover, quality may be seen as a process which principally refers to the outcome of procedures and systems or requirements (Zachariah, 2007).

Quality may also be seen as a culture; it acknowledges the significance of the institution's idea as a transformational series of actions where each segment of the institution is involved, while the institution accepts the challenge of continuous improvement of its systems of doing things. Mishra (2007) further posits that traditionally, educational institutions are seriously concerned with quality; however, educational institutions view it as a culture, where the central point is about continuous improvement of systems. Quality, as a concept, has also been defined by Materu (2007) as fitness for purpose. It encompasses the idea of achieving commonly agreed standards or precepts. Essentially, the standards may be defined by a professional body, by law, or defined by an institution. Again, in higher educational institutions, fitness for purpose varies greatly by programme or field of study. Broadly speaking, factors that quality may be linked to in academic institutions may include their goals and vision;

the expertise and talent of their academic staff; requirements for admissions; assessment standards; the academic environment; graduates' employability (regarding the labour market); quality library; and management effectiveness (Marjorie, 2002).

As in the case of the term quality, "quality assurance" as a concept has no universally accepted definition. Authors have different definitions of for example, according to Gaither (1998) as cited in Alabi et al. (2018), quality assurance refers to the procedures, policies, actions, and attitudes relevant to ensure that an appreciable standard (quality) is enhanced and maintained. Actions from an internal context are needed, but may also require supervision and directions from an external body or bodies. The definition, as stated above, suggests that quality assurance is both an internal and external issue. For Harman and Meek (2000), quality assurance has to do with systematic evaluation and management procedures used by academic establishments to monitor the institution's service outcome against its overall aim(s) to sustain accomplishment of appreciable performance and improvement of standards. Even though quality assurance has numerous definitions, the key words that permeate almost all of the definitions have to do with improvement and maintenance or enhancement of standards of education. As already alluded to, quality assurance encapsulates two terms, that is, internal and external.

External quality assurance is a state of affairs whereby there is an evaluation done by an agency (e.g., a national quality assurance body) outside the institution that is being evaluated. Evaluations typically surround an academic institution's or program's operations to ensure that they adhere to previously established standards (Anonymous, 2008). It is often done by the

diligent review of an accreditation exercise that is executed by an evaluation board, peer review, or by a panel of experts and residents in the accredited institution. Parri (2006) posits that the essence of external quality assurance is to make sure that the goals and aspirations of academic institutions conform to the national goals and standards and also make sure that they are attained. As a result, external agencies expect academic institutions to have a strong quality assurance system in place.

Internal quality assurance is a framework of mechanisms and policies developed by academic institutions for their faculty and program(s) to ensure that the academic institution does not deviate from its goals and is in accordance with national standards for tertiary education and a specific profession (Parri, 2006). Both internal and external mechanisms are relevant. As internal quality assurance sanitises the actions and activities within the academic organisation for continuous improvement, external quality assurance facilitates and supports the internal mechanisms for the achievement of educational goals (Boyd & Fresen, 2004).

Broad Approaches to Quality Assurance in Tertiary Institutions

In general, there are three broad approaches to quality assurance practises in higher educational institutions. The three approaches are used by both higher institutions and external bodies that are responsible for quality assurance. The three approaches include quality audits, accreditation, and benchmarking.

Quality Audit

In general, quality audit refers to independent and systematic evaluations of activities and related results to determine whether they conform to the

planned schedule and whether these schedules are well implemented and appropriate to achieve the desired outcome (Parri, 2006). The process concerns a step-by-step assessment of the quality assurance framework of an academic establishment to be certain of its robustness to accomplish stated objectives. Concisely, it has to do with an inspection of whether the academic organisation is fit for its stated purpose. For audit relating to academics, they are normally undertaken at the institution level. Dill (2000) posits that:

> "Unlike subject assessments or accreditation, however, academic audits make no attempt to comprehensively review an organisation's or programme's activities and resources, nor to directly evaluate the quality of learning or teaching. Rather, audits are directed at those procedures implemented by higher education managers in order to improve and assure the quality of teaching and learning" (p.188).

This step-by-step approach to evaluating the academic institution tends to give an outlook of quality audit as a very soft system because it functions mainly in terms of the school's own objectives. Hall and Noyes (2007) point out that most quality audit approaches attempt to subject institutions to enhancement of their self-evaluation systems. Assumption: the key symbol of every good academic environment is the availability of mechanisms that enable the institution to self-evaluate existing strengths as well as weaknesses in order to embark on improvement measures. A point worthy of note is that as an institution appropriately implements its quality audit, the institution will no doubt also improve (Tsevi, 2014). The reason is that an audit does not use any standards external to the institution to judge that same institution. Its evaluation result has

nothing to do with a fail or pass decision, but instead it assesses an academic establishment against its own objectives and terms.

Accreditation

Accreditation, according to Harman (2011), is a step-by-step review and assessment process that allows an academic institution, its program, or course(s) to be accepted or recognised as meeting appropriate standards. In broad terms, accreditation is carried out to affirm whether an academic environment or a programme meets the set criteria of the accrediting agency or body. The assessment, in most cases, yields a no or yes result, although more often than not, institutions that fail minimally or totally are provided with provisional accreditation subject to further review. There are two main purposes for accreditation. First of all, accreditation affirms the appropriateness of academic programmes and the academic environment as a whole.

Secondly, accreditation establishes a module (i.e., a framework) for continuous improvement (Herman, 2011). Conceptually, the term accreditation, as being used in tertiary educational institutions, gained its roots in the United States, but the concept has now been used internationally over the years (Newton, 2002). A major shortfall of the accreditation process is that it depends so much on academic institutions to legitimately defend their operations, and this comes with a huge time investment relative to the collation of relevant supporting documents (Utuka, 2012). The accreditation process is bureaucratic and time-consuming since the accrediting body takes time to go through all the relevant documents submitted by the academic institution. In developed jurisdictions, for example, the USA, the accreditation process is a non-governmental activity (Utuka, 2012). However, in other developing countries,

like Ghana, accreditation mechanisms are orchestrated by the government of Ghana, which specifies required minimum standards and the activities are supervised by the National Accreditation Board.

Benchmarking

Kempner (1993), as cited in (Utuka, 2012) explains benchmarking as a progressive process for assessing and comparing the operations of one institution to a similar institution with which they have something in common. In this sense, an external focus is brought forward in direct comparison with an internal function and operational activities. For Kempner (1993),

> benchmarking solicit information, having in mind certain key questions: First of all, how good is our performance compared to other sister institutions in the same business with us? Who is doing it well, we or they? If they, how do they do it? How can we adopt what they do into our operations? How can we be better than what we did previously? (p.22).

It is a medium where organisations on the same production path are compared to each other for the purpose of improving what they do. A lot of higher institutions of learning have benefited from benchmarking practices. Benchmarking has provided many institutions with new performance targets. Again, it has assisted many organizations to understand what actually drives quality service delivery and objective measurement procedures to track institutional progress (Utuka, 2012).

Managers of academic institutions are provided with a standard or an external point of reference for assessing the cost and quality of their institution's internal activities, practices, and framework for achieving goals. Benchmarking

is often seen as an effective diagnostic procedure because it provides an alternative solution for quality provision in higher education institutions (Shafer & Coate, 1992). Even though benchmarking has numerous positive recommendations, it equally has shortfalls. One such criticism has to do with the complex process of putting together a comparative database for most academic institutions based on their visions and purposes. Again, some institutions regard themselves as distinct from others and, as a result, are hesitant to provide relevant data to a required organization, particularly if that organisation is perceived by other organisations as a potential competitor (Utuka, 2012).

Quality assurance in Ghana's Higher Education

The World Bank (2004) postulates that academic pursuit is a necessary need for all emerging economies. It is a tool for turming around economic fortunes, especially in recent times where knowledge has become an indispensable ingredient. The quality and adequacy of knowledge produced at tertiary schools is fundamental to competitive nation-building (Utuka, 2012). Quality education is the only reliable tool that can improve citizens' minds and help transform society politically, socially, and economically (Zakari, 2016). Nations can achieve sustainability in terms of their development by sharpening, through quality higher education provision, the skills of their human resources. In accordance with the above-listed benefits, the Ghana government officially introduced quality assurance structures in Ghana through the establishment of the National Accreditation Board (NAB), which was placed directly under the Ministry of Education (Tsevi, 2014). It is an agency for the nation responsible for assurance of quality in higher educational institutions in Ghana. It was

officially born by the Provisional National Defense Council Law 317 of 1993 (PNDC Law 317, 1993). This law was, however, amended by an Act of Parliament, which subsequently brought in the enactment of NAB Act 744, 2007. The PNDC Law 317 authorises the National Accreditation Board as the mother agency, mandated to give accreditation to both private and public academic establishments in Ghana regarding the standards and content of their programmes. In addition, NAB is authorised to give the equivalents of certificates, diplomas, or even degrees obtained in the country and/or overseas.

The passing into law of the National Accreditation Board Act 744 in 2007 by Ghana's parliament causes it to have the powers to execute the responsibilities so named above and also to oversee quality assurance issues in the country. Additional duties which the agency was accorded with included making known the accreditation status of academic institutions as well as the programmes that they are running, which are seen as appropriate for a particular academic year. The agency is also responsible for advising the Presidency and other cabinet officials on issues concerning the award of a "Presidential Charter" to private higher academic institutions. NAB, as a regulatory body, was also expected to perform any other responsibilities as given by the Education Ministry. As a statutory requirement, the National Accreditation Board Act 744 of 2007 established departments or units responsible for tertiary institutions' internal quality assurance (IQA). Tertiary schools that were certified by the agency were required to have an internal quality assurance unit for a period of no less than five (5) years from the date of initial accreditation or confirmation. The presence of an effective internal assurance quality unit serves as a mechanism for evaluating the activities and outcomes of an academic

establishment towards re-accreditation of the same and the subsequent award of a "Presidential Charter" in the case of private tertiary schools (NAB, 2010).

NAB (2010) posits that the responsibilities of the internal quality assurance department are numerous, which actually depend on the vision of the school. The internal quality assurance department may carry out the underlisted duties:

1. Assess and provide technical advice to the management of the institution on matters of internal quality.
2. play an oversight role in the conduction of the institution's exams and related activities.
3. spearhead the building of capacity for the teaching and non-teaching staff of the school.
4. Oversee the school's accreditation processes and other quality matters as they may relate to NAB, especially the drafting of annual reports.
5. Facilitate the construction, application, and dissemination of quality criteria to all administrative and academic activities of the school.
6. Ease the integration and collation of information (feedback) from learners and other industry players on issues within the school.
7. Advance the culture of quality by continuously organising seminars and workshops on relevant quality assurance topics.
8. Serve as a bridge agency by documenting, harmonizing, and dispatching information on quality assurance as may be applicable to the institution.
9. build-up and store comprehensive information that concerns quality assurance.

10. Prepare a yearly report on how quality has been assured in the institution by using the quality criteria (i.e., benchmark) outlined for the school as the basis.
11. Oversee matters pertaining to the school's external and internal hierarchical ordering of programs.
12. Oversee activities related to the school's affiliation, with a focus on mentor institutions assisting mentee institutions with curriculum development and evaluation.

For the responsibilities outlined above, various academic environments, particularly professional institutions, public universities, and academic institutions, have created quality assurance directorates, units, or offices to carry out those tasks. From this, the institutions will be grounded and ever ready for performance evaluation by NAB. Further, the institution will be viable in the world of work by ensuring conformity with expected standards.

Aside NAB is the mother institution for quality issues in Ghana's tertiary institutions; subsidiary institutions that also monitor equity and quality, but with a specific focus on certain defined institutions. First, the National Council for Tertiary Education (NCTE), which came into existence through a parliamentary Act of 1993 (Act 454). NCTE was, among other things, set up to play an advisory role to the Education Ministry on issues relating to tertiary education in Ghana. The council also has the mandate to recommend national standards and norms of utilisation of resources, staff, accommodation issues and costs within tertiary institutions in Ghana. Recently, that is, in the year 2020, the NCTE and the National Accreditation Board (NAB) have been combined to give birth to the Education Regulatory Bodies Act 2020 (Act 1023). The Act,

which was given Presidential Assent on August 21, 2020, provides for the establishment of the Ghana Tertiary Education Commission (GTEC) as a new regulatory body.

The National Board for Professional and Technical Examinations (NABPTEX) was also set up in 1995 to create and execute academic standards and examinations for skills and curriculum competencies for institutions that are not universities, but monitored by NABPTEX NAB. Finally, the Council for Technical and Vocational Training (COTVET) is also an institution formed by an Act of Parliament in 2006 (Act 718) to oversee and coordinate all aspects of technical and vocational education in Ghana. In other words, it is the regulator of the TVET sector. All the listed outlets are to ensure equity and quality higher educational experience and standardisation of qualifications across tertiary institutions in Ghana (NAB, 2010).

Challenges of Quality Assurance Systems in Ghana

Universities in Ghana seeking accreditation face a lot of challenges in undergoing accreditation. In Ghana, some institutions suffer from insufficient human resources, inadequate funding to support the preparatory face of the accreditation process, non-compliance with basic standards, limited capacity building and minimal participation of administrative staff (Tsevi, 2014). On the part of the accrediting institution, challenges include insufficient personnel to give long-term guidance to tertiary institutions and assist them meet the criteria for accreditation. Another challenge has to do with the inability of the accrediting body to effectively monitor all institutions that meet the criteria for accreditation as well as those that do not meet the criteria, yet continue to offer academic programmes to the public (Tsevi, 2014). The accreditation process is

likely manipulated and abused as there is no system guiding principles for putting accrediting agencies on check. This also remains a problem (Alderman & Brown, 2005). Lack of capacity needed to implement quality assurance policies and inadequate salient resources form part of the challenges that accrediting institutions face, which hinder them one way or the other from doing good checks on academic institutions and appropriately accrediting them (Tsevi, 2014).

Origin and History of Student Satisfaction

Barely about decades ago, several concepts from the marketing discipline have gained acceptance and been applied in the higher education arena. Consumer satisfaction is the single most important concept that has been widely used in organisations, including institutions of higher learning (Hermans, et al., 2009). In the tertiary education arena, the concept of "customer satisfaction" has been re-worded as "student satisfaction. Higher educational researchers are now making use of consumer satisfaction literature, concepts, theories, and concepts for empirical investigations (Desai, et al., 2001). The term "students' satisfaction with educational services" (i.e., experience) is now considered to be similar to consumer satisfaction within the marketing industry (Appleton-Knapp & Krentler 2006).

Student satisfaction, as a term, has undergone several metamorphoses over a considerable period. A classic example of gathering the learners' views on educational services dates back to the Yale University learners' survey of 1929 (Williams, 2002). Consequently, since that period, there has been minimal consensus on how such educational service feedback from students should be sampled (Williams, 2002). In the same fashion, the motive behind gathering

students' views has changed from just gathering the learners' opinions to improving and monitoring the quality of instruction and learning and fulfilling the overall purpose of education.

The Concept of Students Satisfaction

In the view of Hom (2002), scholars are faced with difficulty settling on a common description for the concept of student satisfaction. This has led to several definitions of the concept "satisfaction" from different disciplines. This review sought to modify existing definitions of the concept from customer satisfaction theory so that the concept of student satisfaction can be clarified and well understood. Malik, Danish, and Usman (2010) describe satisfaction as an achievement of success in a venture that leads to one's fulfilment. Satisfaction from an educational enterprise point of view generally focuses on the fulfilment of the student populace. Oliver and Desarbo (1988) also see student satisfaction as the favourability of the students' evaluation of the several experiences and results that relate to education, and it is often by campus life or experiences. One can also make reference to student satisfaction as the short-term disposition, which is the product of the evaluation of students' experiences of services that they receive in school.

Universities, in recent times, have had an interest in student satisfaction because of its effect on the students' motivation and retention. Students are the major consumers of educational services, and in line with this idea, Illias et al. (2008) indicate that when it comes to how students attain satisfaction, it often happens as they judge their experiences on campus. Like precious minerals, student satisfaction is important since a student who is satisfied could return

after his/her completion and exit to his/her former school to enrol for new courses or for further studies (Helgesen & Nesset, 2007).

Feedback from students is always important because of the crucial role that it plays in the sustainability of higher institutions' operations. For example, when efforts are made toward the provision of services that are satisfactory to the student populace, the institutions, by this feedback, are rest assured that they will always get students for even new programmes that they mount. Universities can depend on feedback from students to assess their level of satisfaction regarding services that they provide. Rowley (2003) provides four rationales for taking students' views on services that universities provide. Students' feedback is normally taken into:

1. Provide learners the opportunity to showcase how satisfied they are regarding the services that the institution has provided so far.
2. This provides usable evidence that learners were accorded the opportunity to give their views on campus activities and occurrences that provide data for the enhancement of the institution's functions and structures.
3. This gives a reliable opportunity for the institution to align their activities to standard practices.
4. Encourage learners to think about occurrences or activities in the institution that support learning or otherwise.

Learners look out for and rate their lecturers and school's performance in terms of quality provision of services using several indicators. For example, Malin et al. (2019) point out that the lecturers' teaching abilities, flexibility, and excellent coordination substantially influence the learners' academic

achievements. Sherlin (2002) also indicates that lecturers who are friendly and punctual to school are more popular and preferred. This is to say that to achieve maximum satisfaction of students, universities should prioritise all the aspects of the academic environment that support teaching and learning (Devinder & Datta, 2003).

Dimensions of Tertiary Students Satisfaction

Student satisfaction as a construct can often be influenced by many factors. For example, assessment procedures of an academic environment, specifically fairness and relevance, are cited to be major factors that affect students' satisfaction in higher educational institutions (Sampson et al., 2010). Again, student engagement is also seen as an indicator that influences students' satisfaction. For purposes of emphasis, Bradley et al. (2008) point out that lecturers who show real desire toward the improvement of their learners' learning needs will of necessity raise the participation and satisfaction of their students. Students' perception of school's "curriculum as flexible" has been noted to be part of the factors that affect the satisfaction level of students. Tessema, Ready, and Yu (2012) also suggest that when the academic environment makes available several courses and programmes for students to have options or choices, learners tend to be satisfied. Physical structures of schools have been counted among factors that equally affect the learners' satisfaction. For example, academic environments that have adequate and appropriate structures, such as lecture halls, libraries, desks, writing boards, notice boards, computer facilities, laboratories, among others, make students feel a sense of satisfaction (Sohail & Sheikh, 2004).

In consideration of other factors, Walker-Marshall and Hudson (1999) stipulate that among other conditions, such as lectures, instructional practices, assessment format, and physical infrastructure of the school, Cumulative Grade Point Average (CGPA) also significantly contributes to the satisfaction of students. In an attempt to consolidate all the factors that affect the students' satisfaction with educational services, Appleton-Knapp and Krentler (2006) identify two groups of factors that do affect student satisfaction in an academic environment. The factors are institutional (i.e., school) and personal. The school factors are identified as involving quality teaching style, quickness in giving feedback on classroom assessment to students, availability of infrastructure, and so on. Students' related factors (i.e., personal factors) are also identified to include age of the students, gender, personality type of the students, learning style of the students, and the CGPA of the students. In agreement, other empirical studies in the satisfaction literature outline similar factors as listed above by Appleton-Knapp and Krentler (2006). The factors include lecturers' teaching styles; the prestige of the university; the caring attitude of lecturers; the opportunity for the students' growth and development; the campus climate; the availability of infrastructure; and institutional effectiveness (Douglas, Douglas & Barnes, 2006; Palacio, Meneses & Perez, 2002).

The Origin of the term Hardiness

The term "hardiness" was coined by Kobasa (1979) in an attempt to explain the human ability to handle issues and survive during times of stress and change. Based on the earlier propounded theory, that is, the existential personality theory, Kobasa (1979) sought to explain in her original investigative piece (i.e., research) the reasons for highly stressed subjects' not showing any

signs of ill-health, as opposed to their counterparts who were highly stressed and showed signs of ill-health as a consequence of the stress. To test the hypothesis of her study, she made use of an instrument with indicators such as commitment, control, and challenge. The criteria variables used in the study were environmental stress and various health challenges of participants over the time period (i.e., 3 years) for the research. Kobasa named her findings of some respondents' resistant to the consequences of stress as "hardiness. Further, she described the hardiness concept as a personality trait that made some of the participants' stress resistant and free from negative consequences of stress. Kobasa concluded that the hardy personality was actually made up of personality characteristics of challenge, commitment, and control.

The Concept of Hardiness

Psychological hardiness is seen as a personality trait that directs the manner in which individuals think, feel, and behave universally (Vogt et al., 2008). An individual with a high hardiness score is resilient, and such an individual achieves personal growth and well-being as well. However, individuals with low hardiness scores are often distressed and are also self-handicapped (Benishek & Lopez, 2001). Hardiness is made up of three consolidated mental appraisal processes, that is, control, challenge, and commitment. Commitment, conceptually, means the person's tendency to be involved, to be purpose-driven, and to make use of opportunities in one's surroundings.

The second aspect, which is challenge, has to do with a person coming up with new ideas to alter the status quo, but not so much stability per se. This is the most desired aspect of human life where personal development happens

(Benishek & Lopez, 2001). Control has to do with the idea that a person can handle life issues through imagination, the application of knowledge, and the making of appropriate choices. Hardiness generally empowers the individual to cope with life stressors and energises the person to act with a purpose and not to feel powerless (Bartone, Roland, Picano & Williams, 2008). While the majority of investigations have explored hardiness among employed adults, in recent times, empirical studies' attention on hardiness have been directed toward academic environments because of the stressful nature of academic activities (Benishek & Lopez, 2001).

Measurement of Academic Hardiness

Some studies measured hardiness as a unidimensional trait and conceptualised the same as a composite score (e.g., Cole et al., 2004; Vogt et al., 2008). For some scholars, hardiness is seen as a construct that has several dimensions, such as control, challenge, and commitment (e.g., Funk & Houston, 1987; Rhonewalt & Zone, 1989). Operationalization of hardiness as a unidimensional construct has been criticised by many other scholars. This is because defining hardiness as a unidimensional variable makes it impossible for other relevant sub-sections of the variable to be known and measured (e.g., Sinclair & Tetrick, 2000). In an earlier review of the construct of hardiness, Hull, van Treuren, and Virnelli (1987) argue that there exist diverse correlations between the three dimensions of the hardiness construct and any criterion variable, and so any attempt to make hardiness a single-dimensional variable is empirically flawed. The foregoing empirical work suggests that the practise of adding up sub-dimensional scores of hardiness to get a composite score is

problematic and should not be encouraged, although some scholars continue to tread on that path (Cole et al., 2004).

The commonly used instrument for the measurement of academic hardiness constructs is the Hardiness Scale developed by Benishek and Lopez (2001), which has 18-items and three hypothetical sub-dimensions. Benishek and Lopez's (2001) instrument, that is, the academic hardiness scale (i.e. an 18-item scale), was developed based on Kobasa's (1979) operationalisation of hardiness. The instrument was developed to measure the students' academic hardiness. Initially, the authors of the instrument began with a pool of 40 items. In the review process to reduce the items of the instrument, a sample of 481 United States of America high school learners was used for the study. Exploratory Factor Analysis (principal axis), Item Analysis (e.g., item to total correlation), and Confirmatory Factor Analysis were conducted by the authors to identify inappropriate items for rejection. Finally, the authors settled on three dimensions, with a total of eighteen (18). For purposes of this current study, the concept of hardiness was investigated using university students with a larger sample size. Again, this present study also made use of the scores of the individual dimensions for analysis and interpretation.

The Concept of Assessment

Traditionally, assessment, as an educational practice, is aimed at searching for and reporting on information learnt by students, thus, in connection with activities done in the classroom (Amuah-Sekyi, 2016). Assessment is critical to the learning and teaching encountered in school. Assessment, by definition, refers to all activities that instructors and learners carry out to acquire information that can be applied to modify learning and

teaching (Amuah-Sekyi, 2016). This involves the instructor's analysis and observation of the learners' work (reports, homework, tests, long essays, laboratory practicals, and discussion of relevant topics in class). The purpose of the above activities has to do with sampling what a learner may or may not know.

Assessment is also used to guide relevant decisions, such as controlling and motivating learners, selection, and to meet the needs of the public regarding improvement of standards and also for accountability purposes (Nitko, 2001; Biggs, 2003). Essentially, assessment has been divided into two major categories; that is, summative or formative, depending on how the outcome of the assessment is used (Dunn & Mulvenon, 2009). Formative assessment is an integral part that critically forms part of the teaching and learning process that produces feedback as a core part of the academic environment. It also gives information on how effective teaching has become, which in turn may also help to suggest the right remedial action for a student or students where necessary (Anane, 2014). In this line of action, it is mostly called assessment for learning. On the other hand, summative assessment happens at the end of a programme or course to examine the level of the learners' performance or how well a programme has succeeded in achieving its objectives. It mostly comes in the form of external evaluation (i.e., examinations or tests) and is known as assessment of learning.

Assessment Practices in Higher Educational Institutions

In higher institutions of learning, lecturers are expected to put up and implement an assessment framework that complies with standard educational assessment practices. For instance, assessment specialists do recommend that

learners must be given prior notice of how they would be graded and must be involved in the whole process (Stiggins & Chapuis 2005); the learners' personal characteristics, such as neatness of work, effort, ability, interest, and motivation, should not be a necessary condition for grading students' work since there is no clearer way to objectively measure those attributes (Anane & Adu-Mensah, 2019; Stiggins, Frisbie & Griswold 1989). Students can also be engaged to put the theories they learn in class into practise as part of their overall assessment (Alkharusi, 2011); and learners should be provided with informative feedback on their assessment rather than judgmental one-sided feedback on their academic performance (Alkharusi, 2011).

Moreover, standard assessment practise requires that lecturers make use of several modes of assessment to be able to gather comprehensive information about their students' learning (Nitko, 2001). Again, it is also required that classroom assessment tasks are aligned with the learning targets and give relevant feedback to learners (Nitko, 2001). Furthermore, the National Council on Measurement in Education (NCME), the National Education Association (1990), and the American Federation of Teachers (AFT) have jointly operationalized seven standards for teacher competence in educational assessment of students. The standards state that lecturers must be knowledgeable in selecting and crafting assessment tasks that are critical for instructional decisions; that lecturers must be able to administer test instruments, score, and interpret results of both teacher-created tests and standardised high-stakes tests; and that lecturers must be able to use assessment results when making educational decisions.Lecturers should be able to come up with an accurate evaluation-based grading framework; communicate the results

of the assessment; and eschew all forms of illegal or unethical practises relating to assessment (AFT, NCME & NEA 1990).

As instructors follow sound assessment practices, it is well known among practitioners that assessment has an influence on the students' approaches to learning. Learners' learning approach is in turn closely connected to the instructors' assessment format (Struyven, Dochy & Janssens, 2002). This is to say that the manner in which assessment tasks are framed for learners, that is, open-ended or close-ended, paves the way for the learning style that students adopt over a period of time. However, students' experience of an assessment procedure tells the way students approach future learning. In effect, assessment is thus, reasonably but also scientifically, one of the explanatory factors of the students' approaches to learning (Drew, 2001; Entwistle, et al., 2001).

Teachers and education administrators have consistently deliberated on the weaknesses of the assessment framework of tertiary schools (Boud & Falchikov, 2007; Carless, 2015; Gilles, Detroz, & Blais, 2011). Teachers have showcased their concern about the procedures often used to assess learners and their connection with student learning (Webber, 2012; Trevalyan & Wilson, 2012; Douglas, Wilson & Ennis, 2012). Debates on the issue centers on such areas as whether the learners' success in exams aligns with the required standards. Also, whether tasks on an assessment best measure concepts learned, or whether evaluation activities promote lifelong learning, and whether feedback on an assessment could be a tool to advance the students' learning (Carless, 2015). Educational assessment researchers have posited that educators do not often link assessment to their teaching (Postareff, Virtanen, Katajavuori & Lindblom-Ylänne, 2012). Instead, assessment has been seen as an isolated

activity that is carried out for the sole purpose of fetching grades (Torrance, 2012; Sambell, McDowell, & Montgomery, 2013). However, scholars propose that assessment can be a crucial tool for stimulating active learning in the classroom (McGinnis, 2018; Bonwell, 2010).

Procedures that are often utilised by educators to assess students within universities and other tertiary institutions have considerably increased in recent times (Torrance, 2012). New procedures of assessment have improved the 'traditional' assessment arena, previously characterised by both essay-type tests and multiple-choice tests (Struyven et al., 2002). In recent times, self-assessment, peer-assessment, simulations, portfolios, and other innovative procedures have been introduced in universities. The foregoing approaches define the current modes of assessment in a tertiary education context. The learners' experiences and ideas about the new modes of assessment vis-à-vis the conventional formats form a crucial portion of their perceptions of education quality, especially concerning their academic institution (Struyven et al., 2002).

Forms of Assessment

There are two major categories of assessment in the measurement literature: traditional forms of assessment and alternative forms of assessment. Undoubtedly, the commonly used forms (i.e., also called conventional or traditional forms) are those in which the students are asked to select the right response from a set of provided options/alternatives or asked to construct their own response, as in the case of an essay-type test (Simonson, Smaldino, Albright, & Zvacek, 2000). Because students are to choose the right option from a set of provided options instead of constructing an answer, such an assessment format is known as the "selected-response type. This is to say that the most

traditional form of assessment is the selected-response type. Such assessments include multiple-choice, matching, and true-false tests, and so on.

Alternatively, assessment can demand a test-taker to write her or his own response to a given question or statement (Nitko, 2001). This kind of procedure where a person is expected to write an essay, solve a mathematical problem, or work on a project of some sort is called a constructed-response assessment (Simonson et al., 2000). This form of assessment does not require just a statement or a word. However, responses in the form of descriptions whose quality can be scored either by reading the written work product or by observing a live performance of the assessment activity by competent observers. This makes the procedure merit the name "constructed-response assessments," which are also known as alternative assessments.

Traditional forms of Assessment

These are conventional procedures of assessment that usually take the form of standardised paper and pencil tests. The formats for traditional assessment comprise multiple-choice, true or false, or matching-type test items and essay-type (Nitko, 2001; Etsey, 2012).

Multiple-Choice Tests

A multiple-choice test is a type of objective test in which the respondent is given a stem and then is to select from among three or more alternatives (options or responses) the one that best completes the stem (Etsey, 2012). The incorrect options are called foils or distractors, whereas the correct response is the key. There are two types of multiple-choice tests. These are the single correct or best response type and multiple response types. In the single correct type, only a single response from the options provided is considered as the right

answer, whereas in the multiple response types, two or more responses may be considered right from a given number of responses (Etsey, 2012).

This test format is the most commonly used format by educators for several reasons, such as multiple-choice items have high objectivity in measuring the students' achievement and they are easy to score as well. Again, multiple-choice items allow for an extensive coverage of content, unlike other forms of alternative assessment. The opportunity for bluffing is truncated since students' writing is minimized. Above all, items of this nature are amenable to item and statistical analysis, unlike other forms of alternative assessments. Like a two-sided coin, multiple-choice item usage comes along with some difficulties, such as being relatively difficult and time-consuming in the crafting of test items. More often than not, this form of assessment inhibits the measuring of higher-order thinking skills like analysis, synthesis, and evaluation. Moreover, because a premium is placed on students' reading ability, there is a high susceptibility to guessing for items of this nature (Etsey, 2012). The current study considered multiple-choice test items as those items that measure low-level thinking skills. Based on the researcher's experience as a student of the UCC and also interaction with other friends in UEW, this assessment approach dominates the study context. This informed the inferences made in this study.

True and False Tests

A true and false test consists of a true or false statement. A respondent is expected to demonstrate his/her command of the material by indicating whether the given statement is true or false (Etsey, 2012). True or false tests are simple to score and also simple to administer to test-takers. However, as a weakness, true/false items predispose test-takers to a 50% chance of guessing

and getting the items correct. The weakness, as indicated, becomes worse when the key for the test item is false and it becomes difficult to tell whether the student really knows the key. A possible solution to the true and false test's weakness would be to ask test takers to select an option with an explanation for the incorrect response, or to reword the statement correctly. This would, however, make the scoring difficult (Simonson et al., 2000). Like multiple-choice tests, this assessment format is often used in UCC and UEW within the education departments. Inferences of assessment in this study were partly based on this idea.

Matching Type Test

The matching-type objective test consists of two columns. The respondent is expected to associate an item in; for example, Column A with a choice in Column B on the basis of a well-defined relationship. Column A contains the premises, and Column B the responses or options. Like the traditional assessment formats mentioned above, matching-type tests have the advantages of objectivity and easy scoring. This type of assessment format also encourages the integration of information (Reid et al., 2007). Moreover, it helps assess students' understanding of relationships as well as increases the reliability of the scores that are generated by this test type because of its objectivity. The flaws of this test format range from the test items' writing difficulty to the fact that it provides an opportunity for guessing. It is also widely accepted among scholars that the matching format helps in measuring lower-level thinking skills, which stifles the students' creativity (Etsey, 2012). Based on my previous experience in UCC and also interaction with students at UEW, this assessment

format is not prevalent within the two institutions. The study therefore did not consider respondents' responses along this line.

Short-answer Tests

For this type of test format, "items are written either as direct questions requiring the learner to fill in a word or a phrase or as statements in which a space has been left blank for a brief written answer" (Simonson et al., 2000). Moreover, the items need to be crafted in a more precise manner. Otherwise, allow students to provide their own responses to the items that are subjective in nature (Simonson et al., 2000). This type of assessment gives room for some subjective responses to understand how the student has understood the concepts. This type is also best suited for measuring lower-level thinking skills. As in the case of multiple-choice and true/false items, experience has shown me that open-ended items in UCC and UEW are often in the format of short-answer test types. For purposes of inferences and interpretation, the assessment procedures of the two universities that were perceived to be relevant were thought to include a short-answer type test.

Essay type Test

Among the traditional forms of assessment, essay items have the longest history (Nitko, 2001). Instructors have found essay items to be very versatile tools for assessing students' acquisition of learning targets. Instructors use essays in two different situations. First, instructors in discipline areas such as communication studies, psychology, education, social studies, science, history, business, and literature use essay items to assess whether their students can compare, explain, communicate, contrast, analyse, synthesize, evaluate, and otherwise express their thinking about several aspects of the subject (Nitko.

2001). Instructors at all levels now recognise that students need to write and communicate in all subject areas, not just language-arts subjects (Etsey, 2012). These instructors recognise that essay items are very effective for assessing higher-order thinking but not efficient for assessing the students' rote memory (Etsey, 2012).

Second, instructors use essay items to assess writing skills per se. Instructors of basic writing skills use essay items to assess the students' abilities to write standard English, use appropriate language expressions, write for different purposes, such as exposition or persuasion, and use writing to communicate with others (Nitko, 2001). Students essay and other written work can be used to assess many problem-solving abilities and higher-order thinking skills. The written work can also be part of performance and portfolio assessment activities. Broadly, essay items are usually partitioned into two aspects. Extended response and restricted response items. Each type is useful for its own purposes. Generally, restricted response essay items limit what the test giver will permit the student to answer. The way a restricted response essay item is phrased require a student to limit both the content and the form of the written response (Nitko, 2001). In the case of extended response essay items, test-takers have the freedom to craft their own ideas and interrelationships among those ideas and also organize the ideas in a manner they so desire. It is worth stating that both restricted and extended tools are useful for directing students learning toward creative thinking and problem-solving.

Using the strength of essay test items as the basis, studies have argued that classroom assessment is and can only be relevant when it is able to direct students' learning toward the deep approach where students are trained to

become creative thinkers and problem solvers (Lizzio & Wilson, 2013; Stiggins & Chappuis, 2006). In an academic context where the assessment culture is dominated by essay test items, students may see the procedure as one that promotes higher order of learning than the objective type test, even if they are not too comfortable with it due to the tolls of demand that essay tests place on students. This current study investigated the perceptions of students about the assessment procedures that are prevalent in their school. The study also explored the perceptions of the students regarding the relevance of such procedures in the acquisition of life-long skills.

Alternative Forms of Assessment

Alternative forms of assessment are more experimental and practically based methods of evaluation. This assessment method requires that learners be involved in several activities that utilise their logical thinking, analytical and reasoning capabilities (Nitko, 2001). They take the form of performance assessment and portfolio assessment. When these forms of assessment are used, concepts that are learned are linked to real-world situations. These forms of assessments are more detailed and relevant. Alternative assessment is sometimes called authentic or performance assessment. These terms are not interchangeable; however, the alternative in alternative assessment usually has a meaning that is opposite to traditional assessment forms, such as multiple-choice (matching, true-false, completion) item formats and so on. From an educational philosophy point of view, the word "authentic" in authentic assessment usually means that a learner is being presented with activities that are directly educationally meaningful instead of indirectly meaningful (Nitko, 2001).

Performance Assessment

Whenever a learning objective requires learners to use their skills and knowledge from several fields to complete a task or an activity, performance assessment becomes the option (Nitko, 2001). In performance assessment, hands-on activities are presented to the students with specified criteria to evaluate the extent to which they achieve the application specified by the learning objectives. In this case, if the performance task(s) presented has direct educational relevance, it becomes an authentic assessment (Nitko, 2001). Unlike traditional forms of assessment, performance assessment tasks demand learners to use their skills and knowledge from several fields to indicate that they can achieve a learning objective (Nitko, 2001). The current study considered project work and write-ups or reports from micro and macro teaching practise to be part of this type of assessment.

Portfolio Assessment

For the purposes of assessment, a portfolio is a restricted gathering of a learner's output (i.e., work) that is used to either showcase the learner's best work(s) or demonstrate the learner's academic growth over a stipulated period of time (Nitko, 2001). Setting a criterion for judging merit, providing evidence of student self-reflection, as well as involving the students in the selection of artifacts, form the basis for building a portfolio (Andrew, 2004). Due to its additive (i.e. cumulative) nature, the building of a portfolio demands a lot of effort on the part of the students, especially when it comes to the creation and selection of new artifacts. On the part of the teacher, the exercise requires commitment and sacrificing of one's time to get students practically solve problems through portfolios (Brown & Hudson, 2002). This current study

considered portfolios developed by students during macro-teaching as a type of this form of assessment.

Students' Perception of Assessment Relevance or Appropriateness

Learners' perceptions of assessment procedures in an academic environment affect their learning style, achievement motivation, and their overall perception of academic quality (Struyven et al., 2002). The approach that a student(s) takes to learning academic tasks is frequently influenced by their observations of the school's assessment procedures. For example, if a student adopts a deep learning approach to learning, it is because he/she has observed that his/her school lecturers frequently use assessment methods that he/she considers appropriate (Reid, Duval & Evans, 2007; Ramsden, 1997 as cited in Struyven et al., 2002).On the other hand, students adopt a shallow learning approach that tends to inhibit their creativity or even develop a negative attitude toward learning when they have experience of excessive workload and inappropriate forms of assessment (Struyven et al., 2002).

In determining the form of assessment perceived by students as appropriate or inappropriate, Struyven et al. (2002) concluded, after thorough analysis of empirical work by Entwistle and Entwistle (1991), and Entwistle and Tait (1990), that learners who were seen to be aligned to a surface learning approach preferred "traditional assessment procedures" which emphasise rote learning and cramming of facts. However, students who reported being aligned with the deep learning approach preferred performance assessment procedures (i.e., alternatives) that would allow them to exhibit their understanding of what they have read. This may mean that if the prevailing assessment regime of a particular academic environment is not aligned with the learning preferences of

the majority of the students, they (students) may consider the academic organisation not satisfying their interests. In this study, students considered assessments of the two universities to be relevant. These assessment formats were seen as "multiple-choice, true and false, and short-answer type tests" since they were the assessment formats that dominated in the education departments of the two universities.

Conceptual Framework

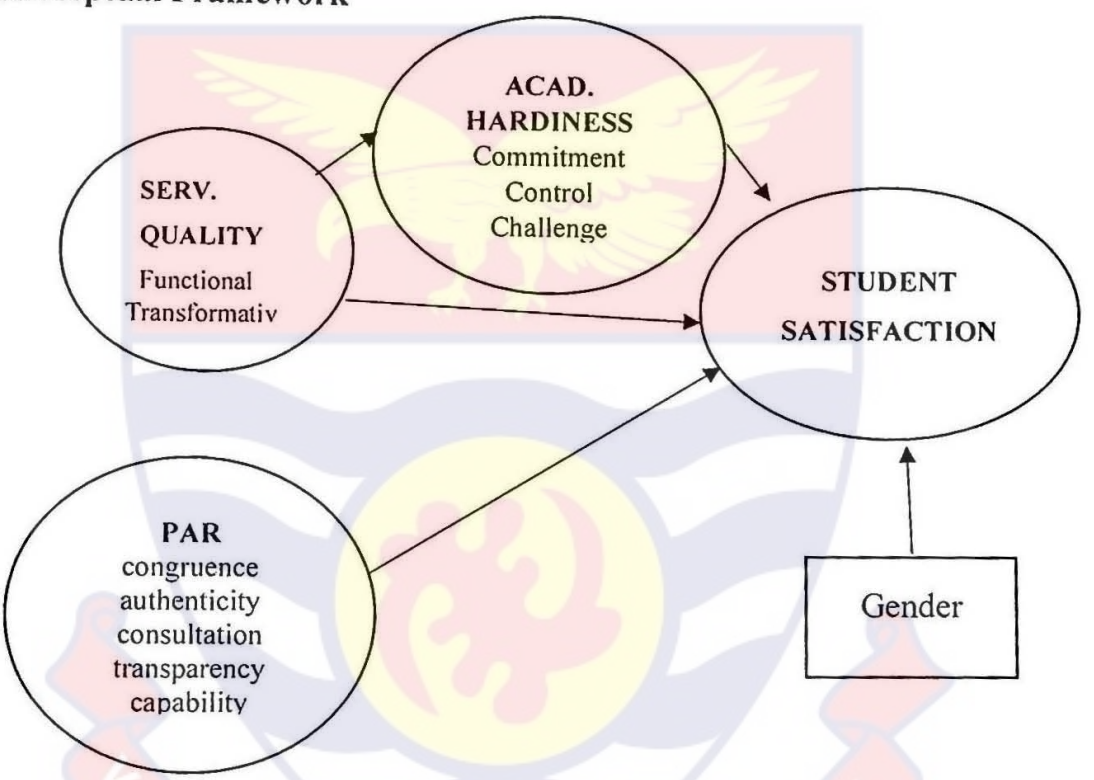

Figure 1: Predictors of students' satisfaction of educational services

Figure 1 depicts an illustrative structure of a hypothesised model of indicators of students' satisfaction within the framework of assuring quality in institutions of higher learning. The model proposes that students' perception of assessment practises (i.e., born out of policy) in an academic setting would predict the students' satisfaction (a criterion measure of quality). Again, service quality, as pointed out by numerous studies (Zakari, 2016; Similarly, Sultan & Wong, 2010), predicts the students' satisfaction. Moreover, in this model, it is hypothesised that students' capacity to manage numerous academic tasks with

accompanied stress (i.e., hardiness) would predict the students' satisfaction on one hand and mediate the relationship between service quality and satisfaction on the other hand. The anticipated model, when tested and maintained, intends to alter the narrative of quality measurement in institutions of higher learning, which has over the years focused attention on institutional dynamics (such as institutional image, technological infrastructure, and quality dimensions), explaining satisfaction as a criterion measure for quality assurance. Moreover, the role of hardiness would also be highlighted regarding the connection between perceived quality and students' satisfaction in the yet to be tested model.

Empirical Studies

Students Satisfaction of Educational Services

Karna and Julin (2015) explored the students' satisfaction with university facilities in Finland. In a survey, the researchers collected quantitative data from 357 respondents, made up of 250 students and 107 faculty members, using a questionnaire. The results showed that primary facilities, which involve teaching and research facilities, have a stronger impact on the students' satisfaction than supportive facilities. Also, it was discovered that learners perceived physical facilities to be more crucial than other infrastructure. In this study, physical facilities and library facilities were the most predictive factors of the students' satisfaction. Finally, it was also shown that learners were satisfied with indicators that were connected to campus accessibility, public spaces, and a comfortable learning environment.

Despite the fact that Karna and Julin's (2005) study makes an important contribution to the discussion of university facilities that satisfy students, the study makes no attempt to investigate the possibility of students' innate characteristics (e.g., hardiness) that can also contribute to their satisfaction.This current study sought to fill the gap left by the authors.

Yusoff, McLeay and Woodruffe-Burton (2015) identified some relevant contextual variables that significantly influenced the learners' satisfaction in Malaysian universities. Using cross-sectional survey design, a questionnaire was made and administered to 1200 undergraduate business students at four private universities in Malaysia. Accordingly, classroom assessment, atmosphere of the lecture halls, lecture or tutorial facilitation materials, student support facilities, textbooks, fees for tuition, lecturer-student relationship, promptness of assessment feedback to students, and class size were seen as the variables that had a significant impact on the satisfaction of learners.

The study discovered relevant variables which cover both the social and physical environment of students. However, since the study did not have the objective to explore the impact of the hardiness disposition of students on satisfaction. This current study sought to fill that gap by examining the influence of hardiness on students' satisfaction with educational services.

Farahmandian, Minavand, and Afshardost (2013) examined the satisfaction of students at the International Business School at the University of Teknologi Malaysia. Data was taken from 800 business final year students by using a questionnaire, and the analysis was done using multiple linear regression. The study discovered that curriculum, academic advising, financial assistance, teaching quality, university facilities, and tuition fees had significant

impacts on the satisfaction level of the students. Even though some variables were identified in Farahmandian et al.'s (2013) study to contribute to satisfaction as a weakness, the level of the students' satisfaction was not measured. This current study sought to measure and report the level of the students' satisfaction.

Wilkins and Balakrishnan's (2013) study sampled 247 undergraduate and post-graduate students at satellite campuses in the United Arab Emirate (UAE) to serve as respondents. The respondents filled out a questionnaire either by using hard copies or online. The study results revealed that qualified academic staff, availability of good learning resources, and availability of technological resources had significant impacts on the students' satisfaction regarding educational services provided by transnational universities in the UAE. In all, students were satisfied with educational services. It was further discovered that there was a significant difference in the satisfaction levels of undergraduate and postgraduate students for the above-mentioned educational services. The Wilkins and Balakrishnan (2013) study points out that the availability of learning resources and good technological infrastructure had a strong impact on the level of satisfaction of learners. What is not known is whether, in the presence of effective teaching and the availability of learning resources, certain personality characteristics, such as resilience, could also affect the students' satisfaction with educational services. This present study attempts to fill the identified gap.

Arambewela and Hall (2013) investigated the factors that contribute to the satisfaction of postgraduate students in some universities within Australia. The study utilised a descriptive cross-sectional design where 411 international postgraduate business students were purposively sampled from five Australian

universities. It is also aimed at identifying factors that affected the selection of Australia as a destination for study. The study made use of the SERVQUAL scale to measure the students' opinions about the educational process on the selected educational campuses. The researchers concluded that the reason for choosing Australian universities was that many students were highly satisfied with the educational services they received from Australian universities after analysing the data using a structural equation modelling approach. Further, respondents were of the view that Australian universities helped them acquire skills for the world of work compared to other Asian universities.

Garcl a-Aracil (2009) conducted a study in eleven European countries. With the help of cross-sectional survey design, four European countries were randomly sampled, and 2300 students were used for the study. After analysing questionnaire data using a multivariate procedure, the study findings showed that the students' satisfaction for educational services within the four countries was relatively the same, even though there were differences in the education systems of the four countries. Findings further indicated that variables such as course content, modern library, teaching and learning resources, as well as teaching quality, had an adequate impact on the satisfaction level of the students. The larger sample size and the coverage of Garcl a-Aracil's study are commendable; however, as a limitation, the study ignored as part of its objectives the quantification of the overall level of the students' satisfaction. The current study has the objective of exploring the overall level of the students' satisfaction with educational services.

Alsarmi and Zaied (2006) explored how much students of Colleges of Education in Sultan are satisfied with the educational services of the colleges. The participants of the survey comprised 501 learners registered at the colleges. The findings showed that learners were unsatisfied with the academic supervision services. Further, the study findings indicated that the satisfaction of learners was highly dependent on the number of times they met their supervisors. Those who met with their supervisors frequently were more satisfied. Also, learners who were supervised by instructors from their college were more satisfied than their peers who were supervised by instructors from outside the college. Even though the study makes an important contribution to the discussion of the students' satisfaction, the weakness of the study has to do with the failure on the part of the study to investigate the possibility of student-related variables, such as resilience to supervision pressures.

Navarro et al. (2005) investigated the students' satisfaction with educational offers provided by a Spanish university. A quantitative survey design was used, and 205 students were chosen to participate in the study. After data processing and analysis, findings revealed that the adequacy of academic staff, instructional procedures, and the offering of diverse courses were major factors that impacted the students' satisfaction. It is self-evident that teaching and assessment go hand in hand. As a weakness, Navarro et al.'s (2005) study failed to assess the perception that students have about the assessment culture of the university. This current study sought to fill the identified niche by investigating the students' perception of assessment relevance.

Mai (2005) examined student satisfaction and explanatory indicators of satisfaction. In this study, 322 postgraduate students from business schools in the United States and the United Kingdom were asked to rate their satisfaction with the educational services they received at their universities. The findings showed that students had a high satisfaction level. Further, the study outlined the students' perception of school quality, expertise of professors, technological infrastructure, and availability of preferred courses as defining indicators of the students' satisfaction.

Aldemir and Gulcan (2004) explored satisfaction with educational services among Turkish students in some selected universities. Quantitative data was collected using a student satisfaction questionnaire. In all, 327 people were able to participate in the study. The results of the study showed that for some Turkish university students, the quality of instructors, textbooks, and general learning environment were considered to be important factors of satisfaction.

Clearly, empirical studies in the literature appear to suggest that students' satisfaction is a complex phenomenon which is amenable to several factors. Some students are satisfied with the adequacy of university tangibles, such as libraries, study halls, and so on. Some students, on the other hand, are satisfied with the quality of teaching staff, instructional methods, and the overall learning environment. This current study intends to investigate the case of students in the traditional education universities in Ghana's satisfaction level with educational services.

Treatment of Satisfaction Concept in Previous Studies

In the quest of the majority of studies to measure and understand what brings about student satisfaction with educational services, the concept (i.e.,

satisfaction) has been posed in most cases as a criterion. For purposes of emphasis, Asaduzzaman et al. (2013) explored the students' satisfaction and service quality in some selected universities in Bangladesh. SERVQUAL questionnaires were administered to a sample of 550 students. The findings revealed that SERVQUAL dimensions significantly predicted the students' satisfaction. In the above instance, it is observed that "students' satisfaction" was used as a criterion variable while service quality was treated as a predictor variable.

Again, in the study of Hassan et al. (2019), the idea was to examine satisfaction of students and services provided. They also studied service quality and student satisfaction in Malaysian universities. SERVQUAL questionnaires were administered to 400 undergraduate students, and the finding was that quality service significantly explains the students' satisfaction. Once more, in the study of Hassan et al. (2019), they observed that "students' satisfaction" as a concept was used as a criterion variable while service quality was an independent variable.

Similarly, Sultan and Wong (2010) investigated the students' satisfaction in connection with an empirically developed performance based on a service quality model (PHed) in Japanese universities. A sample of 360 students were given quality assurance questionnaires to answer where it was found that service quality significantly influences the students' satisfaction with educational services. As in the case of other studies cited above, Sultan and Wong's (2010) study also treated the student satisfaction variable as a criterion variable and service quality as an independent variable. The above studies are just a few that have been cited to emphasise the point raised. In line with

standard practise in educational research of service quality that prioritises the "students' satisfaction", this current study also sought to investigate how several predictor variables (i.e., assessment relevance, hardiness, and service quality) explain the students' satisfaction as a criterion variable.

Furthermore, several studies in the literature used the variable "student satisfaction" to estimate (i.e., measure) the quality of an academic programme or even an institution as a whole.In other words, studies have argued that in order for stakeholders in education to know whether an academic programme or institution is fit for purpose, students' satisfaction can serve as a standard of evaluation. In a study by Corts, Lounsbury, Saudargas, and Tatum (2000), the researchers discovered that satisfaction with a programme was linked to the students' satisfaction with course content, instruction, career preparation, and class sizes. That is, the students' perception of academic quality is basically a product of their level of satisfaction with the programme or institution. Also, Abbasi, Malik, Chandry, and Imdadallah's (2011) study concluded that student satisfaction is often used as a yardstick for evaluating what students expect from their educational institutions, which comprises the totality of the activities that make students eligible to become successful and productive people in the world of work.

In contrast, a small number of studies have also used the concept of "satisfaction" as a predictor variable. These empirical studies use indicators of satisfaction to explain other independent variables. An example is the study of Starr, Betz, and Menne (1972), who discovered that the satisfaction level of students for educational services had a negative correlation with the rate at which students continued to be part of a university. The study revealed that

students who continued to stay with their university had higher satisfaction than their counterparts who quit the university. In a different study, Suhre, Jansen, and Harskamp (2007) also discovered that the students' achievement of academic tasks was highly dependent on their level of satisfaction with an academic programme. This is to say that when students are satisfied with academic services, their retention rate and academic achievement increase. Once again, this present study made use of the satisfaction concept as an outcome variable and not a predictor variable.

Differences Between Male and Female Students' Satisfaction of Educational Services

Son, Ha and Khuyen (2018) explored gender difference in the students' satisfaction for educational services in Thai Nguyen University. Student satisfaction questionnaire was administered to 395 students as respondents of the study. The Two-Way ANOVA test and Tukey Post Hoc Tests showed that there was no difference in the satisfaction of male and female students, however, differences existed among students based on grade level, that is, 5-year student and 1-year student have difference in their level of satisfaction. In line reference to the earlier demographic variable, that is, gender, the study did not attain any statistical significance. The attainment of non-statistically significant difference might be in part due to the sample size. The sample size used, that is, 395 was not too large. Statistics as a matter of fact responds favourably to larger sample sizes. This current study intends to use large sample size (i.e. 1200) to explore gender difference on the students' satisfaction.

Ebulum and Chidiobi (2016) studied the role of gender, age, and resilience as indicators of satisfaction with academic majors among undergraduate university students. Respondents for the investigation comprised 200 (i.e., 99 males and 101 females) learners of Godfrey Okoye University, Enugu. The Academic Major Satisfaction Scale (AMSS) and the Resilience Scale (RS-14) constituted the instruments that were used for data collection. Gender did not emerge as a significant explanatory variable of academic major satisfaction in the study.

On the same issue of gender and students' satisfaction with educational services, Suarman (2014) explored gender differences regarding students' satisfaction with teaching quality. Questionnaires were administered to 177 males and 273 females, university undergraduate students. A structural equation modelling approach was used for this study. The results showed that there was no significant difference in the students' perceptions of the quality of teaching based on gender. In this study, the satisfaction of students was centered on only one issue, that is, teaching quality. This current study intends to look at the overall satisfaction of students covering all that the university provides them, that is, teaching quality, library services, shuttle services, internet services, just to mention a few.

Botha, Snowball, Klerk, and Radloff (2013) investigated the undergraduate students' satisfaction with campus residence life in South African universities. Two thousand (i.e., 2000) students were administered the Quality of Residence Life (QoRL) Survey questionnaire on campus. After the descriptive analysis, the study found no significant differences in satisfaction with QoRL across gender groups. The study made use of a higher sample size

and also makes an important contribution to literature about issues of quality academic residence for students. The limitation is due to the fact that the researchers focused attention on the students' perception of the quality of their campus residence alone, neglecting other quality areas such as "assessment culture" and "general service quality" that involves administrative staff support to students, academic staff support to students, and so on. This current study makes an attempt to explore the students' perception of general quality services (which involves security, teaching, administrative services, assessment, residential services, etc.) of the universities under investigation.

Further, Ilias, Hasan, Rahman, and Yasoa (2008) examined the difference in the students' satisfaction of service quality using background information (i.e., gender, race, and semester of studies) of respondents. These researchers administered questionnaires to 200 undergraduate students from two private universities in Malaysia. The findings showed no significant difference in female and male students' satisfaction with educational services. The limitation of this study partly rests on the sample size used. The sample was too small and might have contributed to the non-significance of the test. This study intends to use a relatively larger sample size to explore gender differences in quality service satisfaction among students.

On the other hand, some studies appear to report significant gender differences in the students' satisfaction with educational services. Akpoiroro and Okon (2015), for example, investigated gender differences in student satisfaction with educational services at federal universities in Nigeria, specifically the South-South Geopolitical Zone.A total of seventeen hundred (1700) undergraduate students (that is, from first year to fourth year) for the

year groups of 2008/2009 to 2011/2012 were administered a 35-item questionnaire to measure their satisfaction with educational services. A T-test analysis showed that significant differences existed between males and females in their satisfaction with the educational services that they were receiving.

Again, Tessema, Ready, and Malone (2012) investigated the impact of gender on criterion variables, such as satisfaction of students, GPA, and ACT scores at Midwestern public universities within the year range of 2001 to 2009. Students' demographics and data on satisfaction were gathered from a sample of 5223. The results indicated that gender had a significant impact on satisfaction of students, GPA, and ACT scores. Even though the primary focus of the investigation for Tessema et al. (2012) was on the effect of gender on the satisfaction of the above-named outcomes, results further demonstrated that within the gender variable, student satisfaction for each of the school outcomes (i.e., ACT scores and GPA) differed significantly.

Tessema, Ready, and Yu (2012) explored the indicators that impact on the satisfaction of students. Mid-Western United State University collected data over a nine-year period.An online data collection approach was utilised where data was taken from 6,602 respondents. A four-point Likert questionnaire that captures eleven items on factors that affect the students' satisfaction with educational services was used. The demographic variables that were paramount in the study were gender and age. The results showed that all the eleven indicators had a relationship with the students' satisfaction with the services that were provided. Further, the respondents were found to significantly differ in their satisfaction based on gender. Males were noted to be more satisfied than their female counterparts.

In summary, the findings of the studies on gender differences in the students' satisfaction with educational services appear to be inconclusive. As a number of studies (e.g., Son et al., 2018; Ebulum & Chidiobi, 2016) found significant gender differences in the students' satisfaction, other studies (i.e., Akpoiroro & Okon, 2015; Tessema, et al., 2012) also did not identify any gender differences. The inconsistency in research findings regarding the subject of gender differences in the students' satisfaction with educational services makes it ideal for a lot of studies to be conducted on the issue. This current study therefore has the objective of further examining gender differences regarding the students' satisfaction with educational services using data from Ghana.

Students' Academic Hardiness

Based on the idea of individual differences in terms of how people cope or manage stress, especially in an academic environment, it was important for this study to explore how stress coping personality (i.e., hardiness) could affect the students' satisfaction. This part of the review reports empirical studies on the students' hardiness score levels and how those scores relate to other outcome measures (e.g., satisfaction).

Nasiri (2016) examined how self-efficacy and hardiness affect work satisfaction of secondary school educators of Shahriar. Employing a descriptive design, the study recruited 302 individuals using a simple random method. All the respondents responded to a questionnaire, and the results indicated that educators with high scores of hardiness had increased self-efficacy and satisfaction scores. Aside from the fact that Nasiri's study made use of high school teachers, the focus of his study was different from knowing how

hardiness as a variable affected the students' satisfaction with educational services.

In a study where students were at the center, Kamtsios and Karagiannopoulou (2015) investigated academic hardiness among undergraduate university students in Greece. The study sampled 478 students to serve as the respondents of the study. The respondents were administered the revised version of the academic hardiness scale. The study reported that learners had low hardy scores for challenge and commitment within the period of the investigation on campus. The findings of the study indicate that hardy individuals experienced less academic stress. The study makes an important contribution to knowledge about hardiness within the academic environment; the study had no objective to examine hardiness impact on the students' satisfaction. This current study has the objective of examining how hardiness impacts on the students' satisfaction with educational services.

Maintaining the focus of hardiness investigations on university students, Moradi, Banitalebi, and Pazhuhesh (2014) also explore the academic hardiness and self-efficacy effects of the undergraduate students' attitude toward computer programmes. Employing a descriptive cross-sectional survey design, 150 students were sampled to take part in the study. The questionnaire was completed by all of the study's samples, and the results revealed that the learners with high scores on the hardiness construct and self-efficacy had positive attitudes toward the computer program. Even though Moradi's et al.'s (2014) study indicated that psychological hardiness has an impact on affective outcomes (e.g., attitude), the sample size used was relatively small for a sound

generalization. Further studies on the issue of hardiness are highly recommended.

In line with the purpose of understanding university students' hardiness, Sheard's (2009) study explored whether undergraduate students differ significantly in their academic hardiness score based on background characteristics such as age and gender. The work further investigated whether academic hardiness would predict the score of a final year dissertation and Grade Point Average (GPA). Information was taken from 134 undergraduate students using a questionnaire. Findings indicated that a higher mean score of commitment dimension hardiness was recorded for the female students, while their male counterparts had relatively low scores. The findings further indicated that a high level of hardiness score was a significant predictor of academic performance (i.e., both GPA and dissertation score). The findings are in line with studies exploring psychological hardiness in general, which suggest that women and men use the assessment processes of challenge, control, and commitment in diverse ways (Vogt et al., 2008).

The foregoing studies reviewed have shown that hardiness as a personality variable has extensively been investigated and reported. All the studies that appear to emanate from the western world. Efforts to get studies on hardiness studies conducted in Ghana as of the time the study was conducted proved futile. This current research fills the void in literature by exploring the issue of hardiness in the Ghanaian context.

Academic Hardiness Impacts on Students' Satisfaction

Academic hardiness as a concept is an emerging phenomenon in the education literature. Since the emergence of the terminology in 1979, it has

mostly been linked to the students' academic performance, stress, resilience, and preference for a particular programme. As at the time this present study was conducted, there were no available studies that linked academic hardiness to the students' satisfaction with quality educational services. Much effort was exerted in the search for literature on the "impact of hardiness on students' satisfaction", but all the information retrieved was outside that of the intended objective. Search engines such as ERIC, PubMed, Science Direct, and Google Scholar, which are known to scholars to be the best search engines, were used, but to no avail. The following studies found that even though not directly related to the issue of hardiness and satisfaction, the concept (that is, hardiness) was related to student academic achievement and other evaluative outcomes.

A lot of empirical investigations into academic hardiness have turned attention to the connection with performance in secondary school (e.g., Karimi & Venkatesan, 2009; Benishek & Lopez, 2001) as well as tertiary institution learners (e.g., Sheard & Golby, 2007; Lifton, Seay, McCarly, Olive-Taylor, Seeger, & Bigbee, 2006). Investigations done mostly discovered weak positive correlations when composite academic hardiness scores were used (e.g., Lifton, Seay, & Bushke, 2000). However, the findings appear to be the opposite when the hardiness sub-scale scores are used. Some empirical work findings, for example, have shown that the correlation between commitment and performance is significant but not for control or challenge dimensions (e.g., Sheard, 2009; Sheard & Golby, 2007), whereas other studies have discovered correlations between challenge dimension and performance (e.g., Maddi & Khoshaba, 2005).

The Hardiness construct among students has also been explored as a predictor of the learners' self-evaluations. In a study, Cole, Field, and Harris (2004) discovered that overall hardiness scores were positively correlated with learners' learning motivation, and Maddi et al. (2009) discovered that high hardiness scores were also correlated with learners' positive attitude (e.g., class attendance) and academic self-efficacy.Similar findings have been discovered among secondary school students. For instance, Benishek and Lopez's (2001) study discovered an association between academic hardiness and perceptions of self-worth to be significant and positive. Typically, greater correlation scores have been obtained between self-evaluations and hardiness than between academic performance and hardiness.

Academic hardiness as a variable has been discovered to have an explanatory relationship with educational choice, persistence, and longevity among learners. For example, Bartone et al.'s (2008) study revealed that United State Army trainees who were rated high on the hardiness scale had a higher chance of completing the training school. Lifton et al. (2006) also revealed that learners who graduated from university in the shortest possible time had academic hardiness scores above average, whereas learners who took longer time to complete or even dropped out of school were those who rated low on the academic hardiness scale. Moreover, Eccles, Vida, and Barber (2004), who conducted a study on a similar issue of hardiness, reported that secondary school learners who rated high on the resilience scale stood a greater chance of selecting more demanding programmes of study.

Furthermore, hardiness construct has been discovered to be connected with the students' age, pointing out that hardiness might progressively become apparent maybe due to human life transitions (Tisdall, 2001; Sheard, 2009). Also, some researchers have discovered hardiness among students to have a link with gender (Benishek & Lopez, 2001); however, not all studies (e.g., Maddi, Harvey, Khoshaba, Lu, Persico & Brow, 2006). Benishek and Lopez (2001) discovered females in secondary grade level to have greater commitment scores (i.e., hardiness dimension) than their counterpart males. Nevertheless, the academic literature is not uniform on the findings in connection with hardiness and gender. Generally, there is a knowledge gap in literature on the issue of whether or not hardiness significantly predicts the students' satisfaction of educational services. This current study intends to fill the gap by investigating the aforementioned problem.

Mediating Effects of Academic Hardiness in the Relationship between Service Quality and Students' Satisfaction of Educational Services

This aspect of the review concentrated on the mediating role of the hardiness construct in the connection between the students' satisfaction and service quality. The prime focus of the review would be on whether or not "hardiness" could act as a mediator variable. This is because within the hardiness literature, the concept of hardiness has mostly been used as an antecedent of other criterion variables and not satisfaction per se.

Yu and Liang (2021) investigated the correlations among work-related hardiness, first aid effects, and the efficacy of administering first aid. The study further explored the mediating function of work-focused hardiness among cabin crews of some selected airlines. Three data collection instruments (i.e., affect

questionnaire, hardiness questionnaire, and self-efficacy questionnaire) were used to gather data from cabin crew staff, who numbered 525 across the five selected airlines in Taiwan. Findings revealed that the cabin crews' work commitment (i.e., hardiness dimension) mediated their affect for first aid and efficacy of administering first aid. Even though Yu and Liang's (2021) study makes a significant contribution to the hardiness literature, the focus of the study was not related to measuring the mediating role of hardiness within educational variables. The current study had the objective of examining hardiness variables in a high-school environment.

In a different empirical work, Lin, Tang, Shen, Liang, Tang, and Tsai (2020) also explored the mediating role of hardiness dimensions (i.e., individual challenge, control, and commitment) in the connection between technology-assisted teacher support perception and technology-embedded scientific inquiry (TESI). Data was collected from 1,566 students from various Chinese schools, with a mean age of 11.5. The statistical procedure that was used to analyse the data was structural equation modelling (SEM). The results indicated that the students' perception of technology-assisted teacher support had an indirect effect on their TESI score. Further, the findings also showed a significant mediating effect of the hardiness construct for the connection between TESI and technology-assisted teacher-support perception. The difference that the Lin et al. (2020) study makes is that the focus was on Chinese children at the basic level of their education. However, it makes sense to argue that the way and manner in which adult students (e.g., university students) may cope with stress may not be the same as children at the basic school level. This current study would investigate the phenomenon of hardiness using university students,

purposely to know the state of the art regarding hardiness among university students in Ghana.

In a typical senior high school context, Abdollahi, Panahipour, and Allen (2020) examined the mediating effect of academic hardiness and the relationship between feelings of belongingness and academic-related stress. Among the senior high school students that were targeted, 405 were recruited to take part in the study. Data was collected with the help of questionnaires and the analysis was done using a structural equation modelling procedure. The results showed that academic hardiness and a sense of belonging to school were significant indicators of academic related stress. Again, the results revealed that hardiness related to academic work has an indirect effect (mediator) on the connection between academic-related stress and a sense of school belongingness.

Abdollahi, Abu-Talib, Yaacob, and Ismail (2014) examined the indirect effect of hardiness in the relationship between happiness and stress perception among general nurses. The respondents consisted of 252 general nurses from six individuals' owned hospitals in Tehran. The respondents were made to complete the Perceived Stress Scale, the Personal Views Survey, and the Oxford Happiness Inventory. A robust structural equation modelling approach was utilised to test the study's hypotheses. The findings revealed hardiness as a partial mediator between happiness and stress perception in nurses.

In summary, the foregoing studies reviewed have shown that "hardiness" as a variable has a mediating effect on several psychological and educational related variables. What appears to be missing in the hardiness literature has to do with the indirect effect of hardiness in the relationship

between the students' satisfaction and service quality. This current study seeks to bridge the identified knowledge gap. In line with the identified problem, the current study has an objective to measure and statistically test the indirect effect of academic hardiness in the connection between the students' satisfaction and service quality.

Service Quality Impact on Students' Satisfaction

This section of the review focuses on studies on service quality in a tertiary education context and how it affects student satisfaction. Several studies in the service quality literature have found that the service quality of universities does affect student satisfaction. Mattah, Kwarteng, and Mensah (2018), for example, investigated indicators of service quality from the perspectives of graduating students at the University of Cape Coast. The instrument used to take data from 500 graduating students was a questionnaire; however, 482 of the respondents responded and returned the questionnaire for analysis. Principal component analysis was done in determining the indicators of service quality. Further analysis made use of the Z-test and independent sample T-test specifically for the estimation of mean scores of respondents on the relevant variables.

The results showed three major indicators of academic service quality, that is, relevant academic programmes; quality teaching staff; and quality educational facilities and services. The results further indicated that graduands had high satisfaction for all the indicators, that is, educational services, academic programmes, and academic staff. The respondents (i.e., gradunads), however, had low satisfaction with the university facilities. Most of the graduands are likely to return to the mother university for further studies

because of their high satisfaction level with at least the programmes and the staff. As a weakness, the study was limited to academic quality, which relates to "university facilities, lecturers, and programmes." However, in this current study, the quality of the university's assessment would be examined.

Zakari (2016) also investigated the learners' perception of educational service quality and how such perceptions affect the loyalty of the learners to the university. The service quality model served as the conceptual basis for this work. Using a quantitative method, a questionnaire was used to gather information from 379 learners at the Business School of the University of Ghana. A structural equation modelling method was utilised for the analysis of the information. The results showed that scores on dimensions of the service quality scale differed for both postgraduate and undergraduate learners. Institutional reputation, assurance, responsiveness, and tangibles were seen to be higher for undergraduate learners, whereas empathy, institutional reputation, and tangibles were also higher for postgraduate learners. Further, the results indicated that university reputation had a significant predictive effect on both learners' loyalty and satisfaction with educational services.

The limitation of Zakaria's study was that the respondents were taken from a single school (that is, Business School, UG). Clearly, the views expressed may not represent the entire university's view on service quality. The current study therefore intends to use all the colleges within the selected universities to get an adequate representation of the student population for the purposes of gathering data on the issue of education service quality.

With the same interest in knowing about service quality and the students' satisfaction issues, Van, Schalkwyk, and Steenkamp (2014) investigated issues of service quality and how they are implemented in individually owned universities in South Africa. Students' samples numbering 984 were recruited to undertake the study. A standardised service quality (SERVQUAL) questionnaire was utilised in the gathering of the data. The results of the study revealed that services were perceived to be of high quality and, in addition, components of the SERVQUAL questionnaire had a significant impact on the students' satisfaction and perception of service quality.

In a different empirical investigation, Poturak (2014) examined learners' perceptions of the quality of educational services and their satisfaction with such services. In taking the data, 300 learners were recruited from some privately owned universities in Herzegovina and Bosnia. The findings revealed that learners perceived services to be of quality. Educational service quality was also found to significantly affect their satisfaction. The shortfall of this study has to do with the sample size used. The study's sample size inadequacy compared to the population of students makes the study finding generalisation problematic. The current study intends to use a larger sample size to get a better picture than what was revealed by Poturak's study.

Kundi et al. (2014) examined the effect the learners' perception of service quality had on their satisfaction within the university. The researchers made use of 200 students from Gomal University in Pakistan. The study made use of the SERVQUAL instrument for data collection and the results revealed a significant predictive effect of service quality on the learners' satisfaction with educational services.

In a study that seems to corroborate earlier studies, Mang'unyi and Govender (2014) explored the students' perceptions of service quality and satisfaction level in some selected privately owned universities in Kenya. Using the HEdPERF questionnaire, data was collected from 522 learners within the selected universities. The outcome of the study showed a significant positive connection between the service quality dimensions and learner satisfaction.

In a study, Asaduzzaman et al. (2013) also searched to know whether there is a relationship between service quality and learners' satisfaction of educational services in universities within Bangladesh. A standardised service quality questionnaire (SERVQUAL) was administered to 550 learners. The results of the investigation showed that the learners' satisfaction with educational services had a significant correlation with all the dimensions of the service quality scale. Annamdevula and Bellamkonda (2012) developed a new measurement scale known as HiEDQUAL for evaluating university learners' perceptions of service quality in India. Learners who numbered 358 were sampled and administered the HiEDUAL questionnaire. The outcome of the study showed that quality indicators, such as good administrative services, academic facilities, learner support services, teaching, and course content, had an influence on the satisfaction of students. Tuan (2012) analysed the effects of price fairness and education service quality on Vietnam universities. The study's findings revealed that good administrative services are significantly related to learners' satisfaction with education service delivery.

In discussing service quality and price fairness in relation to student satisfaction in universities. The findings of the study revealed that administrative service quality was significantly and positively related to the

student's satisfaction. Malik et al. (2010) examined the perceived impact of service quality on university learners' satisfaction with educational services in Pakistan. The standard service quality questionnaire (SERVQUAL) was administered to 560 learners within some selected universities in the province of Punjab in Pakistan. After descriptive data analysis, the results revealed that the learners were satisfied with their universities' general educational services but not with the state of their institutions' infrastructure.

Similarly, Sultan and Wong (2010) set out a study to test the indicators that impact the learners' satisfaction with educational services. In a quantitative study, 360 students from Japanese universities were sampled for the research exercise. Quality variables such as capability, effectiveness, efficiency, assurance, competencies, syllabi, and programme management had a significant impact on the learners' satisfaction. In previous research, Hassan et al. (2008) investigated the correlation between learner satisfaction and the service quality of universities in Malaysia. The SERVQUAL questionnaire was administered to 500 learners in four selected universities. The outcome of the study showed dimensions of responsiveness, assurance, reliability, empathy, and tangibility had a positive correlation with the learners' satisfaction of educational services.

In summary, studies in the service quality in high education literature explore with much focus how dimensions are measured and also how they relate to student satisfaction. The concern at this point is that most of these studies were done in advanced jurisdictions. There is therefore a need for more empirical investigation as to the state of educational service quality (as perceived by students) in universities in Ghana and whether or not students are satisfied with them.

Students' Conception of Assessment Relevance

Empirical studies on classroom assessment practises suggest that the learners' perceptions of the validity and value of classroom assessment affect their learning (Harlen & Crick, 2003; Struyven et al., 2002). As a result, academics should consider students' perceptions of assessment practices, the validity and fairness of the results, and validity.Thus, while lecturers may have a good number of reasons for choosing some assessment procedures, they must equally be aware of their learners' conceptions of these procedures and how these conceptions have impacted their learners' learning and satisfaction with academic life. This part of the literature reviews empirical studies on the university students' general perceptions of the lecturers' assessment and the relevance (or value) of such assessment tasks.

The learners' perception of an institution's assessment regime is thought to have an impact on the learning approaches of the learners. As tertiary education administrators develop and mount programmes and courses, it may be prudent for them to take into consideration these perceptions for the purposes of facilitating learning. The various perceptions that have been attached to certain modes of assessment are discussed in the empirical studies below.

Aldrich, Trammell, Poli, Potter and Garringer (2018) examined how demographic characteristics of students (i.e., gender, age) affect perceptions of the relevance of assessment type (e.g., presentation, exam, and participation) and question format in enhancing learning. Utilizing a quantitative survey design, the study employed 121 students from Midwest University as respondents; 82 were females and 39 were males. The respondents answered 18

questions on the questionnaire, which captures the learners' belief about what they consider the most effective way of assessing learners among students.

After the data analysis with the help of One-Way ANOVA, the results indicated that female students have the belief that examinations that allow students to express themselves in writing (short answer type or essay-type questions) are more effective, whereas male students also have the belief that essay type tests are not too effective. Further, males had the belief that assessment formats that demand students to physically participate, as in the case of laboratory work, are more effective. The disparities in view on assessment among male and female learners could be seen as females preferring to showcase what they know through writing, whereas males have the edge in demonstrating what they know through practical activities.

Alsadoon, Prasad and Beg (2017) investigated the learners' perceptions of electronic assessment at Saudi University for Electronics. The motivation for the conduct of the study was that Saudi University had adopted an electronic mode of assessing their students and wanted to know how students perceive the relevance of such an assessment module. Adopting a descriptive survey design, the study made use of 80 students who had already experienced the electronic assessment since its adoption by the university. Participants' responses to a questionnaire were taken electronically. The results of the study revealed that learners had good perceptions of electronic assessment and had confidence in its features, such as unbiased grading and immediate feedback.

Petrisor, Marusteri, Simpalean, Carasca, and Ghiga (2016) investigated the extent to which learners accept electronic assessment systems. The study made use of 240 general medicine students, 40 from each study year up to the

sixth year. The participants were made to complete a seven-item questionnaire on their perception of electronic assessment. The findings of the study showed that learners had a preference for the electronic assessment system over the pencil and paper assessment. The respondents had the belief that the electronic system of assessment does not only add colour to an assessment regime, its efficiency is higher than other forms.

As in the case of the foregoing studies, Jawaid, Moosa, Jaleel, and Ashraf (2014) also explored how undergraduate learners perceive computer-based evaluation. In a survey, 173 students were selected to complete a questionnaire that contained items that compared a paper-based assessment to a computer-based assessment technique. After descriptive statistics data analysis, the study revealed that learners appreciated such features as automatic grading, personalised feedback, and the use of multimedia platforms. Further, the results showed that learners had a positive perception of the computer-based assessment approach. They found school assessment to be meaningful and fair when administered with technology.

Holmes (2015) explored undergraduate students' perceptions of the effectiveness of the use of low-stakes continuous assessment in higher institutions. The study sampled 20 second-year physics undergraduate students (i.e., 2012–2013 academic year) at Sheffield Hallam University, United Kingdom. After taking students' responses by using a questionnaire, the study discovered that students' learning was perceived to have improved, especially concerning their understanding of certain concepts due to the continuous nature of assessment.

Iannone and Simpson (2013) investigated undergraduate mathematics students' perceptions of assessment in an academic institution within the United Kingdom. The study made use of the Assessment Preferences Inventory (API) to take data from undergraduate learners who numbered 48 who read mathematics. The findings suggested that learners perceived conventional assessment (e.g., multiple-choice, essay, etc.) as an efficient discriminator of abilities. Even though the study makes an important contribution to the assessment literature, its weakness has to do with the smaller sample size that was used for the study. This study's generalizability is unquestionably a problem.The current study therefore sought to investigate the undergraduate students' perception of their university's assessment procedure.

Gulikers, Bastiaens, Kirschner and Kester (2006) also examined the connection between perceptions of alignment and authenticity of assessment on learning approach and learning outcome. Vocational training programme students, that is, number 112, were made to undertake an authentic assessment activity before completing the questionnaire about the authenticity of the activity they performed and how it aligned with the instruction they received prior to the taking of the assessment. Surface or deep study activities and the acquisition of transferable generic skills were measured with a questionnaire as well. Structural equation modelling and correlational analysis were performed on the data. The findings revealed that students believe their school task(s), physical context, and assessment forms are authentic and aligned with instruction.The study also showed that students tend to utilise deep learning approaches and/or increase in generic skill acquisition.

In line with earlier findings on assessment connections with students' learning approaches, Segers et al. (2006) discovered a correlation between the students' perception of assessment demands and the way they learn (i.e., learning style). The formats of the assessment used by teachers were found to have a correlation with students' learning approaches. In this case, learners are more likely to adopt a particular style of learning course material based on their observation of the prevailing assessment format in their school. For example, when an essay-type of assessment is predominant, some students may choose a deep learning approach; however, when the assessment style is a multiple-choice test, learners are more likely to choose a shallow learning approach.

Struyven, Dochy and Janssens (2002) conducted a systematic review of comparing several empirical studies' findings on the students' perceptions of the relevance of assessment methods for their learning. The study gathered empirical studies on the students' perception of assessment from 1980 to 2002 using the Web of Science, PsychINFO, and the Educational Resources Information Center (ERIC). The results of the investigation revealed that the perception that learners had about their school's assessment regime affected their approach to learning. But also, on the contrary, the learning style that students predominantly used affected their perception of their school's assessment methods. Moreover, the study discovered that learners held different opinions on the various formats of classroom assessment. Traditional assessment formats, such as "true and false" and "multiple-choice type," for example, were viewed favourably by learners; however, essay-type evaluations were viewed negatively. Contrary to their previous viewpoints, the results showed that learners perceived alternative forms of assessment to be more

effective, which caused them to learn as compared to the traditional modes of assessment.

Within the assessment literature, students' perceptions of the relevance of a higher education assessment regime appear to be clustered around issues such as assessment validity and fairness, format, and assessment modalities (Amedahe, 2001; Struyven et al., 2002; Anane, 2010; Iannone & Simpson, 2013).If an assessment procedure in a high educational institution is developed in such a way that it is aligned with instruction and the students' expectations, they (students) tend to consider such an assessment to be fair. In a like manner, the values that are embodied by an assessment procedure are often perceived as the validity of the procedure (Nitko, 2001).

Moreover, the students' perception of assessment relevance within higher educational institutions also appears to be driven by the formats that are often used by course lecturers (Struyven et al., 2002). Because assessment format dictates the type of learning approach that students usually take, students believe that certain assessment formats help them learn and acquire relevant skills while others do not (Aldrich et al., 2018). For example, essay-type tests are generally perceived by students as the types that aid students in deep learning, while others, such as multiple-choice and true-or-false-types, merely encourage shallow and rote learning. Studies have shown that a majority of students see general objective test formats (e.g. true or false, matching, multiple-choice, etc) as more favourable assessment methods than the subjective types (such as essays and authentic assessment). They equally perceive objective types of assessment as weak and the type that promotes rote learning, while alternative assessment is the type that supports the acquisition of relevant

learning skills (Ozuru, Briner, Kurby, & McNamara, 2013; Struyven, Dochy & Janssens, 2002).

Furthermore, the students' perception on the meaningfulness of assessment is also in part shaped by the assessment modalities of the higher educational institution. Studies have shown that students have the perception that computer-based assessment promotes fairness in assessment and adds value to what they learn than the paper and pencil test (Jawaid et al., 2014; Petrisor et al., 2016). Students have the notion that electronic evaluations raise the objectivity in grading since the computer scores the assessment tasks regardless of the learners' gender, race, culture and so on (Ozden, Erturk & Sanli, 2004).

Clearly, studies in the assessment literature paint a varied picture of how students may perceive an assessment procedure of a higher educational institution as relevant or not relevant. The implications of such perceptions, especially on students' learning approaches, motivation to learn and satisfaction with academic experience, is an issue that cannot be over-emphasised. The issue of how students perceive an assessment regime and its implications is often context-specific; hence, the need for a study in Ghana to be done on the students' perception of assessment relevance so as to inform assessment policies within the institutions in Ghana public universities in order to drive students' learning.

Perception of Assessment Relevance Impact on Students Satisfaction

Depending on the objectives to be measured and the general purpose of the assessment, the form that an assessment takes differs in difficulty, format, and length (Nitko, 2001). The selection formats of item-type are often contingent on the trait to be assessed. As instructors are clothed with the

responsibility to decide the nature (i.e., traditional assessment or alternative assessment) or the form (e.g., true/false, multiple choice, essay, fill in the blanks, etc.) that an assessment will take, students nonetheless have their perception of the assessment culture of their institution (Struyven et al., 2002). That is, whether the assessment procedure is favourable and supports students' learning or unfavourable, they have an idea about its relevance to their learning. Perception of a situation can furnish the instructor with a lot of information about the impact of that situation on learners' learning. In light of the foregoing, this aspect of the review documents empirical studies about the perception that students have about the relevance (i.e., practicability, fairness, and usefulness) of the assessment they take and how the same has affected their learning and satisfaction.

Ozan (2019) explored the impact of authentic assessment on the academic performance of preservice teachers. Using a mixed-method design that adopted a triangulation procedure, the study recruited 12 preservice teachers within the education faculty of a university in Turkey for the 2016/2017 academic year. The respondents were made to fill in some unstructured diaries, from which the research data was gathered. Analysis of the data showed that authentic assessment was perceived by learners to have improved their academic performance. The study further found that preservice teachers had the perception that authentic assessment, as a method, blends theory and practice. Students were more satisfied with the approach of authentic assessment than being assessed with traditional assessment.

Rasooli, DeLuca, Rasegh, and Fathi (2019) investigated critical incidents of fairness in classroom assessment among undergraduate university students in Iran. Using a qualitative survey approach, 502 participants were engaged; 199 of them were interviewed to share their experience of classroom assessment fairness, while 303 were also interviewed to share their experience of classroom assessment unfairness. The results indicated that learners had the perception that the fairness of classroom assessment was based on procedural, interactional, and distributive principles. Learners, when describing fair incidents, showed good feelings such as satisfaction, feeling valued, hopefulness, and happiness, while they tended to report negative feelings such as disappointment, embarrassment, and anger as responses to unfair incidents during assessment.

Yalman, Basaran, and Gonen (2016) investigated the attitudes and satisfaction of students toward online learning and assessment. The study employed a descriptive survey design where 550 Distance Education Theology undergraduate students responded to a questionnaire on the online issue assessment. Findings showed that most of the learners were satisfied and intrinsically motivated by the online mode of testing. Learners have the perception that the electronic mode of assessment is flexible, saves time, produces reliable scores and provides quick feedback on assessment.

From the perspective of students, it allows them to save time, allow flexibility, increase reliability by mitigating the mistakes made by humans during test scoring, as well as provide adequate and rapid feedback in the computer environment.

Huang and Wang (2012) explored the impact of English online practise exams on students' satisfaction in Taiwan. The population of interest was level 100 English Language students who had the opportunity to take electronic mandatory exams. Forty-two (42) students were randomly sampled from several disciplines within Taichung University for the study. After respondents completed a survey questionnaire and responded to interview questions, the analysis of the data revealed that students were more satisfied with the online practise examination. Further, the students indicated that the electronic assessment was useful to them by aiding their inner willingness to learn because of the features of the electronic mode test.

Tozoglu, Tozoglu, Gurses and Dogar (2004) investigated the students' perception on the relevance of essay and multiple-choice test and how it affects students learning. Adopting a descriptive survey design, the study randomly sampled 50 university students to respond to a questionnaire on item format. After data analysis, findings revealed that although learners perceived multiple-choice format test to be fairer, they held the view that essay format measured the learners' knowledge better. The reason may be that essay test items allow learners to craft their own ideas, require learners to choose and organise their written material, consider multiple perspectives, present their ideas logically and develop a rationale to support their thinking. In the event that the assessment culture of a high educational institution dominates with essay kind of questions, students with the aforementioned perception are more likely to see themselves as being served with better assessment and would be satisfied.

A synoptic view of the above empirical study's findings appears to suggest that relevance or meaningfulness of assessment flows from the stream of fairness in assessment procedure, quick access to assessment feedback, and effectiveness of assessment in enhancing students' learning (Yalman et al., 2016; Tozoglu et al., 2004; Alsadoon et al., 2017). The assessment procedure is also perceived by students to be relevant based on its form. For example, most students believe that authentic assessment that focuses on solving real-world problems has a greater impact on their learning than traditional forms of assessment (Gulikers et al., 2006). Again, in the assessment literature, students appear to be satisfied and perceive the online assessment mode to be more relevant than paper-based tests (Yalman et al., 2016). The plausible reasons may be that online assessment offers flexibility in terms of time and even day to respond to the items on the test; fairness in the administration and scoring of the test; and promptness in the provision of assessment feedback. In developing jurisdictions, including Ghana, this may not be the case because of inadequate technological infrastructure and inadequate information and communication technology skills among students and teachers.

Test formats (i.e., objectives or essays) often used by higher educational institutions also tend to aid students to form certain impressions about the relevance of the assessment culture of the school (Struyven et al., 2002). For instance, in the assessment literature, students perceive objective tests to be easy to answer and favourable, but inferior to essay-type tests. This perception may be due to the fact that objective test items, unlike essays, are generally known to measure lower-level thinking skills (Ozuru, Briner, Kurby & McNamara, 2013). In the event that an academic institution's assessment culture is

dominated by objective test items, students are likely to have a perception that their education system is inferior to what they actually expected.

Clearly, the students' perception of the relevance of the assessment culture of their institution influences their perceived satisfaction of academic services that they received from the institution. The observed common weakness of the foregoing studies on the issue under investigation has shown that none of the researchers measured student satisfaction separately as a variable. Almost all the studies made inferences about the students' satisfaction based on their perception of their institutional assessment culture and did not measure satisfaction per se (Rasooli et al., 2019; Huang & Wang, 2012). This current study therefore sought to measure the students' satisfaction separately and examine whether perception of assessment as relevant or not relevant is an explanatory variable of the same satisfaction construct.

Summary of the Review

In the review, important concepts that relate to the identified problem, such as service quality, the students' satisfaction with educational services, academic hardiness, and assessment, were defined. The review also outlined the major procedures for measuring service quality within a higher education context. Among the measurement procedures mentioned are SERVQUAL, developed by Parasuraman et al. (1988), SERVPERF, developed by Cronin and Taylor (1992), and the HESQUAL scale proposed by Teeroovengadum et al. (2016). However, based on the limitations of SERVQUAL and SERVPERF, as they ignore transformative measurement of quality, this current study opted to utilise the HESQUAL scale since its usage reflects recent conceptualisation of quality measurement within the higher education setting.

To put the study into its rightful theoretical perspective, the "Gronroos Perceived Service Quality Model" and the "Expectancy-Disconfirmation Model" were reviewed. With the Gronroos model, service quality is projected from three staircases, that is, image quality, functional quality, and technical quality. However, in the expectancy-disconfirmation model, the general is that customer dissatisfaction or satisfaction comes from customer comparison of performance (of a service or product) with predetermined standards of performance. According to the model, the predetermined standards are the customers' predictive expectations.

As part of the review, empirical studies on the issues of students' satisfaction with educational services, quality services, academic hardiness, and assessment relevance impacting on students' satisfaction with educational services were reviewed. In the review, it became clearer that scholars were interested in quality education services and students' satisfaction within the quality service literature. The review showed that studies were replete on the students' satisfaction with educational services except that not many studies were done on the influence of assessment relevance, academic hardiness, and quality service impact on the students' satisfaction with educational services in the Ghanaian context. Again, there was no evidence in the literature to suggest that the joint effect of the three predictor variables on students' satisfaction with educational services was achieved. This current study therefore fills the knowledge gap in literature by exploring the impact of assessment relevance, academic hardiness, and quality service impact on the students' satisfaction with education services.

CHAPTER THREE

RESEARCH METHODS

Introduction

The previous chapter reviewed literature relevant to the phenomenon under discussion. This chapter deals with the methodology of the study. This includes the research design, population, sample, and sampling techniques. Also, the validation of the instrument was discussed. Lastly, data collection procedures and procedures for data analysis were discussed.

Research Design

The design that was used for this study was a descriptive survey. The design was used because the researcher sought to measure the respondents' perceptions of educational service quality, assessment relevance, and how academic hardiness tends to affect the students' satisfaction. Again, the researcher sought to collect information on the respondents' overall satisfaction with the educational services that they receive in their universities. The design gathers data to test research hypotheses or answer questions about the prevailing condition of a phenomenon. The design usually attempts to give an objective or accurate picture of a prevailing circumstance (Quartey & Awoyemi, 2002).

Koul (1997) posited that descriptive studies are often carried out to get information that is a detailed description of an existing phenomenon (students' satisfaction of educational services) with the idea of gathering relevant information to prove recent practises or conditions or possibly suggest a framework for the improvement of conditions. It is further argued that in

addition to processing, assigning meaning to the data, and explaining the current state of issues (as in the case of the students' satisfaction in the sampled universities), descriptive surveys are often utilised to determine how adequate an investigated phenomenon is by comparing it with a set criterion. For instance, this study explored meaningful variables, such as service quality, perceived assessment relevance, and academic hardiness, and their effects on the students' satisfaction. Getting access to information from a wide range of participants is a major advantage for the design chosen for this current study. This design is ideal because it would provide a report on the students' perception of the quality of educational services that they receive, their perception of assessment relevance and hardiness variables, and whether or not they jointly affect satisfaction.

A descriptive survey design also has some weaknesses. Marczyk, DeMatteon and Festinger (2005) observed that a descriptive survey, as in the case of other non-experimental approaches, is unable to do away with the possibility of confounding variables, no matter how good the research data may be. The reason for such a weakness is the inability of the design to control the environment and the variables involved in the study. This is to say that the results of the study may, in most cases, be affected by factors unaccounted for other than the main variables of the study.

Leedy and Ormrod (2005) suggested some potential weaknesses of descriptive survey designs that involve the likelihood of getting untrue results since respondents may always shield away to stop others from delving into their private matters. Again, because the design in most cases employs scales or questionnaires, the exercise becomes limited to only the population that can read

and write. This study therefore looked at the weaknesses and made adjustments to control them. In this case, sensitive items were not included in the items on the questionnaire. The study also made use of the population that can read and write. For the sake of clarity in items, simple words were used. Finally, this design is ideal because it is quite easier to cater for the weaknesses as mentioned.

Study Area

The investigation made use of the University of Cape Coast (i.e., located in the Central Region of Ghana) as one of the study areas. The University of Cape Coast (UCC) is positioned in the western part of Cape Coast, about five kilometres directly facing the Atlantic Ocean. Among others, the principal mandate of the university was to groom graduate instructors for technical and second-cycle schools. The university has added to its core mandate the functions of training education administrators, planners, health care professionals, and agriculturalists. The university has five colleges, that is, the College of Education Studies, the College of Agriculture and Natural Sciences, the College of Health and Allied Sciences, the College of Distance Education, and the College of Humanities and Legal Studies. Each of these colleges has an appreciable number of students pursuing various programmes. UCC is one of the first state-owned universities and is at the forefront of producing a lot of educators for the country, Ghana.

Another university that was used as a study area was the University of Education, Winneba (UEW), located in the central region of Ghana. This university was established in 1992 by an ordinance of the government (PNDC Law 322). Like UCC, the core mandate of UEW was to develop teachers as

professionals to execute a new Ghana's education agenda that focuses on redirecting effort along the path of rapid social and economic development. As in the case of the earlier mentioned institutions, UEW has fourteen (14) academic faculties/schools, which include; Agriculture Education, Business Education, Education and Communication Sciences, Educational Studies, Ghanaian Language Education, School of Graduate Studies, School of Creative Arts, School of Business, Science and Environment Education, Social Science Education, Science Education, Vocational Education and Technical Education. The university is also noted to be one of the first public universities to train human resources for educational institutions at all levels of education. Bringing on board UEW will add to the pool of the respondents' experiences from a university that is typical when it comes to educational programmes and how students in that context rate their satisfaction with the services that they receive from the university.

Population

The general population of interest was regular undergraduate (or Bachelor) education students within the University of Education, Winneba, and University of Cape Coast, Cape Coast. The two universities were chosen among the rest because they are part of the four premier universities in Ghana. The first premier university, that is, the University of Ghana, was used for the purpose of pilot-testing in this study. As a result, their characteristics were deemed comparable to those of UCC and UEW. Based on the foregoing idea, UG education students were used for the pilot testing exercise. The selected universities are believed to have existed for some appreciable number of years;

hence, the assumption is that they must have had several quality reforms that could possibly impact on the students' satisfaction.

Moreover, this study has an objective to explore the relevance of university classroom assessment procedures. For this task, the idea is to find out the students' view on whether or not assessment within the traditional universities in Ghana promotes the acquisition of lifelong learning skills for the world of work. The nature of the objective requires that students who share their views on the issue (i.e., assessment relevance) have adequate knowledge of the subject; hence, the need to use students from pioneering traditional universities who have the mandate to train teachers. Students who were targeted in UCC and UEW were presumed to be knowledgeable on the subject of assessment because they had taken a course in educational assessment.

Creswell (2012) opined that the standard for involving a unit in an investigation is contingent on participants who qualify for the study. As of the time of the conduct of the study, there were 6249 students for UCC (Students Records of UCC Data, 2021) and 14, 191 for the UEW. In all, the target population numbered 20440 students; however, the accessible population from which samples were taken was 3328 (refer to Table 1).

Sampling Procedure

The sampling procedure was a multi-stage one. The first stage involved the selection of the two public universities in Ghana among the nine public universities. A purposive sampling technique, specifically a homogeneous method, was used in the selection of the two universities (i.e., UCC and UEW) to be involved in this study. This sampling approach was used because the respondents drawn from the two universities had relatively similar

characteristics and a peculiar knowledge of the subject that the study was investigating. The two universities were purposively selected because studies done within the UCC (Owusu, Akoto, & Abnory, 2016; Boakye-Yiadom, 2021) and UEW (Bampoh-Addo, 2017) indicated that students were dissatisfied with the services that were being provided. Hence the interest of this study to explore predictive factors of students' satisfaction in UCC and UEW. Also, as part of the objectives for this study, "assessment relevance" would be explored. This required students who have taken a course in educational assessment to be used; hence, the choice education students.

The second stage involved the selection of two academic units within UCC and UEW, respectively. One of the selected universities (i.e., UCC) ran a collegiate system; however, faculties were selected from a single college, that is, the College of Education Studies. Faculties in the College of Education Studies (i.e., Faculty of Educational Foundations and Faculty of Humanities and Social Science Education) were selected because knowledge of assessment relevance is an important concept that is peculiar to students who have taken a course in assessment, and so there was a need to use only education students. In line with the same idea relating to the relevance of assessment concepts for the study, a school and a faculty in UEW were used (i.e., School of Creative Art and Faculty of Ghanaian Language Education).

A simple random sampling approach (specifically, a table of random numbers) was used to select two departments from the faculties selected within the College of Education Studies, UCC, and two academic units from UEW (i.e., School of Creative Art and Faculty of Ghanaian Language Education). The third stage was related to the selection of academic departments within the

school and faculties from which students were chosen. A single department was randomly selected from each faculty selected at UCC to add up to the two departments chosen at UEW. In all, four academic departments were chosen for the study (refer to Table 1).

The fourth stage was concerned with the selection of students from each of the selected departments. In doing so, a proportionate stratified sampling procedure was used in all the two universities. At the University of Cape Coast, 201 students were selected from the Department of Basic Education (DBE). The Krejcie and Morgan (1970) table for sample estimation helped to accurately estimate 201 as a representative sample of 425. Specifically, in the Department of Basic Education and all other departments in UCC and UEW, only Level 300 and 400 students were selected. The aforementioned levels were used because they have the most academic experience compared to their counterparts, Level 100 and 200, students, to be able to tell the extent of the quality service provision of their universities. Out of a total of 121 Level 300 students, 109 were selected; and also, out of a total of 102 Level 400 students, the number selected was 92. The selection of participants in the DBE was done with a common sampling ratio (or fraction) of 0.901. The same Krejcie and Morgan (1970) table was used for all the population and sample statistics for the rest of the departments selected for the study. For the Faculty of Humanities and Social Sciences Education, 269 students were chosen to represent the total number of 906 students in the faculty. In specific terms, within the Department of Management Education, 144 Level 300 students were selected out of a total of 217 students. For the Level 400's, who were numbered 189, the number chosen was 125. The

selection was done proportionately using the common sampling ratio of 0.663. A total of 470 students were picked from UCC.

Finally, at the University of Education, Winneba, 278 students were selected from the Department of Arts Education (i.e., within the School of Creative Arts) to represent a total population of 1015. In specific terms, out of the population of 162 Level 300 students offering Arts Education, 147 students were selected. Also, out of a total of 144 Level 400 students in the same programme, 131 were selected. The selection was done proportionately using a sampling ratio of 0.908. For the Faculty of Ghanaian Language Education, specifically from the Department of Akan-Nzema Education, a sample of 278 students was chosen from a population of 982. In specific terms, out of the total of 166 Level 300 students reading Akan-Nzema Education, 151 students were selected. Out of 140 students in Level 400 who were reading the same program, 127 were chosen. The selection was made using a common sampling ratio of 0.908. Five hundred and fifty-six (556) students were sampled from UEW.

For all the selections within the academic departments of the selected faculties, a simple random method (specifically, a table of random numbers) was used. In all, a total of 1026 respondents were selected to represent the two institutions as the study respondents. The figure (i.e., 1026) represented 5% of the population of 20, 440 (Amedahe & Asamoah-Gyimah, 2015). Table 1 provides details of the college/faculties selected.

Table 1-Sample Distribution by Colleges/Faculty for the Two Universities

Institution	Colleges/Faculties	Population	Sample chosen
UCC	College of Education Studies; Faculty of Educ. Found (Dpt. of Basic Educ).	425	201
	College of Education Studies; Faculty of Humanities and Soc. Scie. Edu (Dpt. of Mgt).	906	269
UEW	School of Creative Arts. (using, Dpt of Art Educ).	1015	278
	Ghanaian Language Education. (using, Dpt. of Akan-Nzema Educ.)	982	278
	Total	3328	1026

Source: The universities Students Records, 2021.

Data Collection Instruments

The study made use of four instruments, namely, the Higher Education Service Quality Scale (HESQUAL) by Teeroovengadum et al. (2016); the Perceived Assessment Relevance Scale (also known as the Students' Perception of Assessment Scale) by Cavanagh, Waldrip, Romanoski, Dorman and Fisher (2005); the Academic Hardiness Scale (AHS) by Benishek et al. (2005); and the Student Satisfaction Scale (SSS) by Brady et al. (2002). These scales were compiled into a word document to form a single questionnaire. A questionnaire was chosen because of its effectiveness in collecting data from a large number of people within a short period of time (Amedahe, 2002).

Higher Education Service Quality Scale (HESQUAL)

The higher education service quality scale developed by Teeroovengadum et al. (2016) was adapted and used for measuring educational service quality within the selected universities. The original scale was made up of two dimensions, with 15 items on a Five-Point-Likert kind of scale (that is, very good, good, credit, poor, and very poor). The first dimension of the scale was "Functional Quality," which assessed university students' perceptions of the quality of educational services provided by their institution. This subscale had the largest number of items (i.e., 9) of the entire HESQUAL scale. The internal consistency of the subscale measured by Cronbach Alpha was.90.

The second dimension of the HESQUAL scale was named "Transformational Quality," which reflected the students' belief about how their university had helped change their academic lives to get some relevant skills. This sub-dimension had six items which were all positively worded in nature. The internal consistency index of the sub-dimension was.87. The HESQUAL scale was adapted and used in this present study. In the adaptation process, the items were reworded with simpler words; however, the meanings of the original items were maintained in the adapted items. Even though the HESQUAL scale has high psychometric property, the instrument was further validated using data from the Ghanaian context.

Perceived Assessment Relevance (popularly called, Students Perception of Assessment Questionnaire)

Students' perception of assessment questionnaire is a multidimensional scale developed by Cavanagh, Waldrip, Romanoski, Dorman, and Fisher (2005). The questionnaire has five (5) dimensions and a total of 24 items scored

on a five-point-likert kind of scale, which has the lowest score of one (1) to be strongly disagreed (SD) and the highest score of five (5), strongly agree (SA). The questionnaire was developed to measure the students' views on the assessment process and how it benefits their learning. The first dimension, that is, 'congruence with planned learning', measured the degree to which items on assessment agreed with the activities, goals, and objectives of a learned programme. This sub-dimension has five items and a Cronbach Alpha of.77.

The second sub-dimension, which is "Authenticity," measures the extent to which tasks on an assessment instrument capture real-life situations that are relevant to the learner. The sub-dimension has a total of six items and a Cronbach Alpha coefficient of 0. 72. Students' consultation, which is the third sub-dimension, measured the degree to which learners were approached and given notice concerning the forms of assessment tasks that would be used. The student consultation dimension has four items and a Cronbach Alpha of 0.68. The fourth sub-dimension is 'Transparency,' which measures how well the learner defined and understood the forms and purposes of evaluation tasks. The sub-dimension has five items with a Cronbach Alpha of 0.86. The fifth dimension, 'Student Capabilities (Diversity),' assesses the degree to which each learner has an equal chance of completing the assessment task(s). The sub-dimension has four items and a Cronbach Alpha coefficient of 0.74. The overall Cronbach Alpha index of the Perceived Assessment Relevant Questionnaire was 0.89. The questionnaire was adapted and used in this study. Items were rephrased, but their meanings were not changed. The instrument items were validated using data from the Ghanaian context.

Academic Hardiness Scale (AHS)

The ultimate goal of the AHS was to measure the students' ability to withstand stress in the academic environment without permanent damage, either emotional, psychological, or physiological. AHS has three (3) hypothetical sub-dimensions with 38 items in the original scale developed by Benishek et al. (2005). AHS is a four-point Likert scale, ranging from Strongly Agreed (SA) to Strongly Disagreed (SD).

The first dimension was dubbed "Commitment", which measured the willpower of students to remain involved in events or situations around them in the academic setting. This sub-dimension had 17 items with a Cronbach Alpha reliability index of.82. The second sub-dimension was also named "Control", which measured the students' personality style of having the ability to manage relevant life issues through the application of knowledge, imagination, and choices. This sub-dimension was made up of 10 items with a Cronbach Alpha reliability index of.80. Finally, the third sub-dimension, which was 'Challenge', measured the students' inner power to see stress as a normal part of academic life and, as a result, take advantage of it to learn. The sub-dimension had 11 items in all, with a Cronbach Alpha coefficient of.77. In all, 13 items were negatively worded; hence, reversed scoring. The scale was adapted for the purpose of this current work. In the adaptation process, all negatively worded items were changed to positively worded ones. In this study, 18 items, which reflected all the items of the original scale, were reserved to be validated using data from the Ghanaian context.

Student Satisfaction Scale (SSS)

The Student Satisfaction Scale is a unidimensional scale developed by Brady et al. (2002). The scale was developed to measure the overall satisfaction of students about the educational experience that they have received in a particular school context. There are six items on this scale. The scale is a five-point Likert kind of scale, ranging from 1 = "strongly disagree" to 5 = "strongly agree." Internal consistency reliability as measured by the Cronbach Alpha index was.92. The subscale was adapted for the current study by rewording all the items for simplicity of reading and meaning to yield more consistent scores.

Pilot testing

The instrument was pilot-tested using 150 students from the University of Ghana, specifically from the School of Education and Leadership (SEL). At the time that this study was being conducted, the researcher's checks showed that the SEL had no undergraduate programmes of their own. However, there were undergraduate students from other departments who had declared their major courses to be "education" with the school. Such students were the ones that were engaged in the pilot exercise. The SEL was chosen for the pilot exercise because the undergraduate students who have their major course to be education have equal characteristics as the students of the two institutions selected for the conduct of this study. The researcher administered the pilot testing questionnaire himself and allowed the respondents to write comments they found necessary on the instrument for purposes of review. Apart from the fact that the pilot testing exercise helped to fine-tune the instrument (Amedahe, 2002), the exercise also allowed us to test the practicality of the main data collection exercise.

Results on Pilot Testing

The purpose of piloting the instrument was to examine the individual items and fine-tune them. Also, in order to test the precision of the hypothesised model, the most common approach often utilised in the literature on structural equation modelling is a two-stage process consisting of a measurement model and a structural model. In this section, the first stage, that is, the measurement model, was tested, which was principally a confirmatory factor analysis. However, in the second stage, that is, the structural model, which would be tackled in chapter four. For the measurement model, attention was placed on the examination of construct validity, which is a product of both convergent and discriminant validity. In the estimation of discriminant validity for all the scales, Fornell and Larcker's (1981) criterion was used. This criterion was used for three reasons. The AMOS procedure does not readily produce HTMT results, but PLS-SEM does. Second, the Fornell and Larcker (1981) criterion is the most widely used method in the literature (Civelek, 2018; Devillis, 2017) for SEM estimation of discriminant validity. Thirdly, for parsimony, the Fornell and Larcker (1981) criterion was preferred to the HTMT in this study. Aside from the construct validity, the goodness of fit of the data and the internal consistency of the scales were also inspected.

Test of Model Fit of Higher Education Service Quality Scale

The primary objective of model fitting is to explore how well the data collected for this study fits the proposed model (Schumaker & Lomax, 2004). In this respect, the present study aimed to compare the predicted model covariance, that is, from the proposed model with the sample covariance matrix from the data collected. Fit indices under the three major fitting categories (i.e.,

Absolute Fit, Comparative Fit, and Parsimonious Fit) were inspected. A summary of the fitness of the data with respect to HESQUAL is shown in Table 1.

Table 2-Model Fit Indices of HESQUAL

Fit Index Category	Range	Recommended Index	Recorded Index
Absolute Fit Indices			
Chi-square (χ2)	--	Non-sig.	1.494
Goodness of Fit Index (GFI)	0-- 1	.90 or better	.91
Comparative Fit Indices			
Comparative Fit Index (CFI)	0—1	.90 or better	.91
Tucker-Lewis Index (TLI)	0—1	.90 or better	.90
Parsimonious Fit Indices			
Parsimony Comparative of Fit Index (PCFI)	0—1	.90 or better	.80

Significant (χ2) = indices above ± 2.0

Table 2 results show that among the absolute fit indices, Chi-square, which tests for the extent of misspecification, was 1.494, which suggests a non-significant fit index. A non-significant χ2 is indicative of a model that fits the data well. However, for a significant χ2, means the data does not fit the sample data. The Goodness of Fit Index (GFI), which also assesses the relative amount of the observed variance and covariance explained by the model, was.91. The GFI showed a good fit because it was within the recommended index of either.90 or better. Comparative fit indices, such as CFI, which recorded a.91 fit index and TLI, which also recorded a.90, were indications of a good fit. Finally, the Parsimony Comparative Fit Index (PCFI) that was inspected also

recorded.80, which showed good fit, even though it fell outside the acceptable fit index of.90 or better. Hence, the data that was collected using the HESQUAL scale recorded indices that met the recommended guidelines, so model fit was considered acceptable (Hair et al., 2010; Byrne, 2011).

Validation of Higher Education Service Quality Scale (HESQUAL)

This aspect of the report presents the outcome on the validation of Higher Education Service Quality Scale (HESQUAL) using Confirmatory Factor Analysis (CFA) approach. A summary of the confirmatory factor analysis is shown in Tables 2 and 3.

Table 3- Item Loadings, Reliability and Average Variance Extracted (AVE) of HESQUAL

Dimensions	Items	Loading	Lower	Upper	P	AVE	Alpha
Functional	SQF1	.597	.540	.645	.001	.34	.82
	SQF2	.606	.547	.655	.001		
	SQF3	.590	.535	.637	.001		
	SQF4	.536	.485	.585	.001		
	SQF5	.628	.577	.675	.001		
	SQF6	.596	.534	.649	.001		
	SQF7	.685	.634	.730	.001		
	SQF8	.574	.515	.623	.001		
	SQF9	.467	.406	.519	.001		
Transformational	SQT1	.742	.706	.773	.001	.60	.89
	SQT2	.817	.789	.842	.001		
	SQT3	.785	.750	.815	.001		
	SQT4	.799	.765	.825	.001		
	SQT5	.728	.692	.759	.001		
	SQT6	.760	.722	.793	.001		

Questionnaire items, SQ1-SQ15, (see Appendix A); * Items to be discarded;

Overall alpha = .88

Table 4-Discriminant Validity of HESQUAL Scale

Dimensions	Functional	Transformational
Functional	(.58)*	
Transformational	.65	(.77)*

*Values in the parenthesis are square root of AVEs.

Results in Table 4 show that all the items that comprised the HESQUAL scale had factor loading beyond the recommended loading of.50 (Civelek, 2018) except for item 9 of the functional dimension. For all the fifteen items, the least had a load of.467, which was approximately the same as the recommended figure of 0.5. Table 4 further indicates that for the two dimensions of the HESQUAL scale, the first dimension, that is, functional quality, has an Average Variance Extracted (AVE) score of.34 while the second dimension, that is, transformational quality, has an AVE score of.60. Using the Fornell and Larcker (1981) cut-off score of.50 for convergent validity, except functional, the transformational dimension, showed good convergence. In cases where a factor does not meet the recommended threshold for convergence, appropriate factor loads of items and reliability (> .70) should be inspected to guide the acceptance or rejection decision of the factor (Retnawati, 2017; Ghadi, Alwi, Bakar & Talib, 2012). Since the factor loads and the reliability indices of the functional dimension were appropriate, the dimension was not deleted or modified. This is to say that correlations between all the questions constituting the construct are high. The implication is that the items are good as far as the construct (i.e., higher education service quality) to be measured is concerned.

Again, Fornell and Larcker's (1981) criterion was used to assess the discriminant validity of the scale. In this criterion, the square root of an AVE score is expected to be greater than the inter-dimensional correlations. The

outcome in Table 3 shows that the functional dimension did not satisfy the discriminant validity criteria because the square root of the AVE score (i.e., .58) was less than the inter-dimensional correlation of.65. Even though poor for discriminant validity, the researcher considered other indicators that were good, such as factor loads and dimensional reliability of.82, to judge it as appropriate for the estimation of the proposed model. The transformational dimension, on the other hand, met the criteria for discriminant validity. Figure 2 shows the CFA model for the HESQUAL Scale.

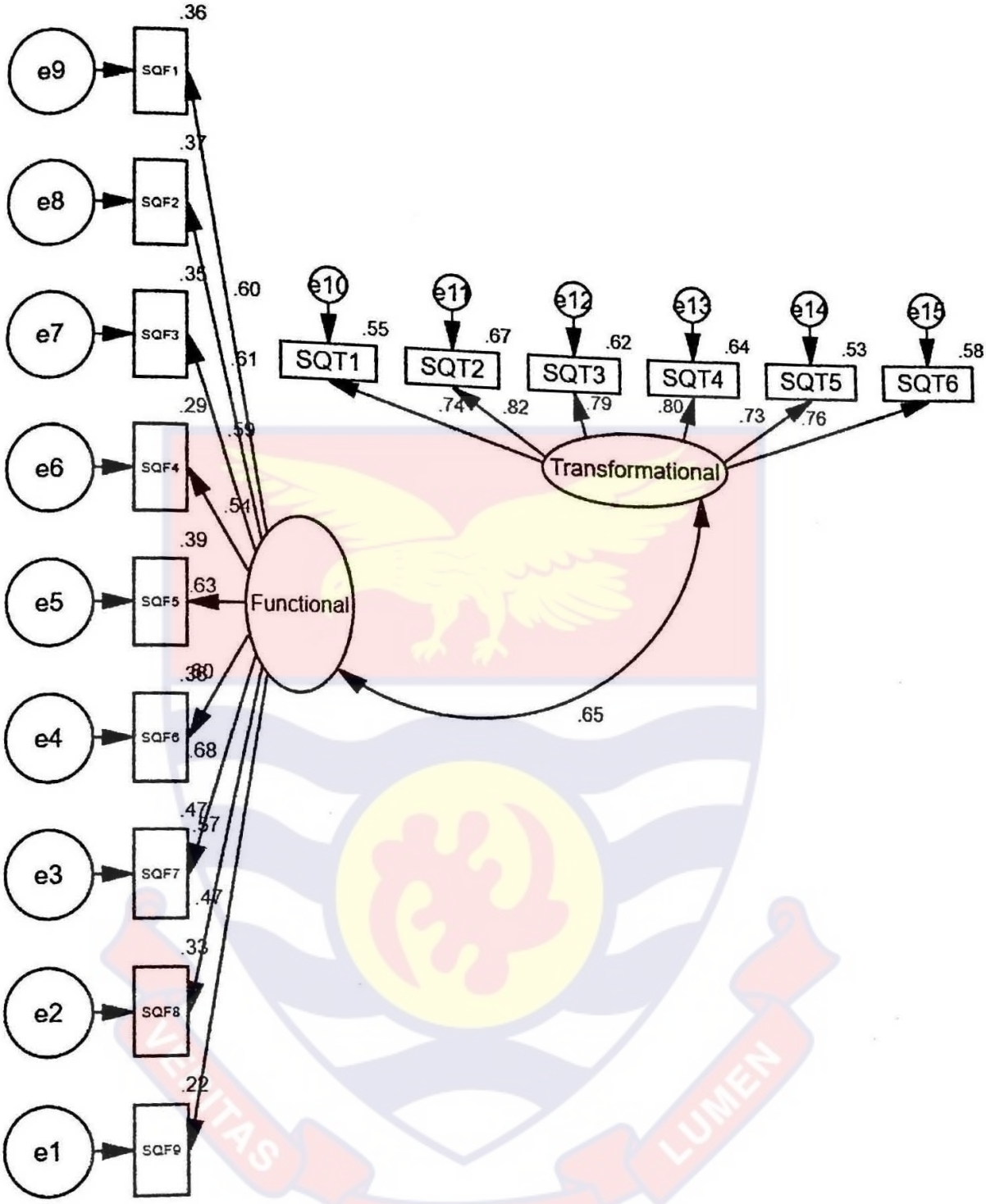

Figure 2-Higher Education Service Quality Scale

Test of Fitness of the Model of Perceived Assessment Relevance Scale

Fitness of the model was examined in line with the data collected with the perceived relevance of assessment scale. A summary of the results is recorded in Table 5.

Table 5-Model Fit Indices

Fit Index Category	Range	Recommended Index	Recorded Index
Absolute Fit Indices			
Chi-square ($\chi 2$)	--	Non-Sig.	4.287
Goodness of Fit Index (GFI)	0-- 1	.90 or better	.92
Comparative Fit Indices			
Comparative Fit Index (CFI)	0—1	.90 or better	.91
Tucker-Lewis Index (TLI)	0—1	.90 or better	.89
Parsimonious Fit Indices			
Parsimony Comparative of Fit Index (PCFI)	0—1	.90 or better	.79

Significant ($\chi 2$) = indices above ± 2.0

Model goodness of fit for absolute fit indices recorded 4. 287 for $\chi 2$ and .92 for GFI. The $\chi 2$ value (i.e., 4.287) is an indication of a significant test which shows a bad fit, its counterpart GFI value of .92 showed a good fit. For comparative fit indices, CFI showed an acceptable fit with .91 while TLI also recorded .89 which is an indication of a good fit. Parsimony Comparative of Fit Index (PCFI) recorded an index of .79 which is a good fit because it falls within the range of 0 and 1.

Validation of Perceived Assessment Relevance Scale (PARS)

This part of the report document observations on validation outcome of perceived assessment scale. A summary of the results is indicated in Tables 6 and 7.

Table 6-Item Loadings, Reliability and Average Variance Extracted (AVE) of PARS

Dimensions	Items	Loading	Lower	Upper	P	AVE	Alpha
Congruence	ARC1	.228*	.162	.294	.001	.40	.70
	ARC2	.619	.570	.662	.001		
	ARC3	.628	.581	.674	.001		
	ARC4	.696	.654	.735	.001		
	ARC5	.661	.615	.705	.001		
Authenticity	ARA1	.640	.593	.683	.001	.50	.85
	ARA2	.750	.716	.779	.001		
	ARA3	.725	.689	.756	.001		
	ARA4	.743	.706	.773	.001		
	ARA5	.748	.715	.779	.001		
	ARA6	.581	.532	.626	.001		
Consultation	ARC1	.673	.629	.711	.001	.44	.75
	ARC2	.719	.679	.754	.001		
	ARC3	.683	.636	.726	.001		
	ARC4	.583	.536	.632	.001		
Transparency	ART1	.681	.637	.716	.001	.40	.75
	ART2	.454	.383	.488	.001		
	ART3	.566	.513	.616	.001		
	ART4	.733	.693	.768	.001		
	ART5	.670	.627	.706	.001		
Capability	ARCa1	.464	.340	.462	.001	.40	.71
	ARCa2	.633	.582	.679	.001		
	ARCa3	.712	.669	.751	.001		
	ARCa4	.735	.694	.771	.001		

Questionnaire items, Q19-Q42, (see Appendix A); * Items to be discarded;

Overall alpha = .89

Table 7-Discriminant Validity of PARS Scale

Dimensions	Congruence	Authenticity	Consultation	Transparency	Capability
Congruence	(.63)				
Authenticity	.67	(.71)			
Consultation	.57	.56	(.66)		
Transparency	.58	.51	.82	(.63)	
Capability	.44	.42	.66	.73	(.63)

*Values in the parenthesis are square root of AVEs.

Results in Table 6 show that across the five dimensional structure of the perceived assessment relevant scale, all the items except one item (i.e., item 1 of the congruence dimension), recorded factor loading approximately the same and for many of them beyond the recommended loading of.50 (Civelek, 2018). The only item that recorded a factor loading below the threshold of.50 was the first item under the congruence dimension (i.e., assessment in courses in my department more often than not measures what I memorize). The implication is that the first item was merely dead wood, contributing little to the construction's measurement. Item 1, under congruence, which is question number 19 on the questionnaire, was deleted. In addition, aside from the "authenticity" dimension, all the remaining four dimensions recorded AVE scores below the.50 threshold when using the Fornell and Larcker (1981) criterion. In respect of convergent validity, the data show that the 'authenticity' dimension met the criteria for convergent validity. In this respect, the examination of other indices (such as reliability, factor loadings, inter-construct correlations, etc.) may play a critical role in determining the relevance of the scale (DeVellis, 2017). Table 5 is indicative of the fact that, aside from the first item, all the other items had higher factor loading. Moreover, most of the inter-construct correlations were

beyond.5 (refer to Table 6), and the reliability indices for all the dimensions were beyond.70.

The discriminant validity of the PARS scale was also examined. In Table 6, results show that the square root of the AVE for the congruence dimension (i.e., .63) was higher than most of the inter-construct correlations in the column for congruence. Also, the square root of the AVE for authenticity dimension (i.e., .71) was higher than all the inter-construct correlations within the column for authenticity. This suggests that both dimensions (i.e., congruence and authenticity) met the criteria for discriminant validity. Consultation and capability dimensions partially met the criteria for discriminant validity. However, the transparency dimension did not meet the criteria for construct validity because the square root of the AVE (i.e., .63) was less than the inter-factor correlation of.73. Clearly, the presence of moderate discriminant, convergence, and good inter-construct correlations suggests an appreciable level of construct validity for the PAR scale. Figure 2, depicts the conceptual model for the PAR scale.

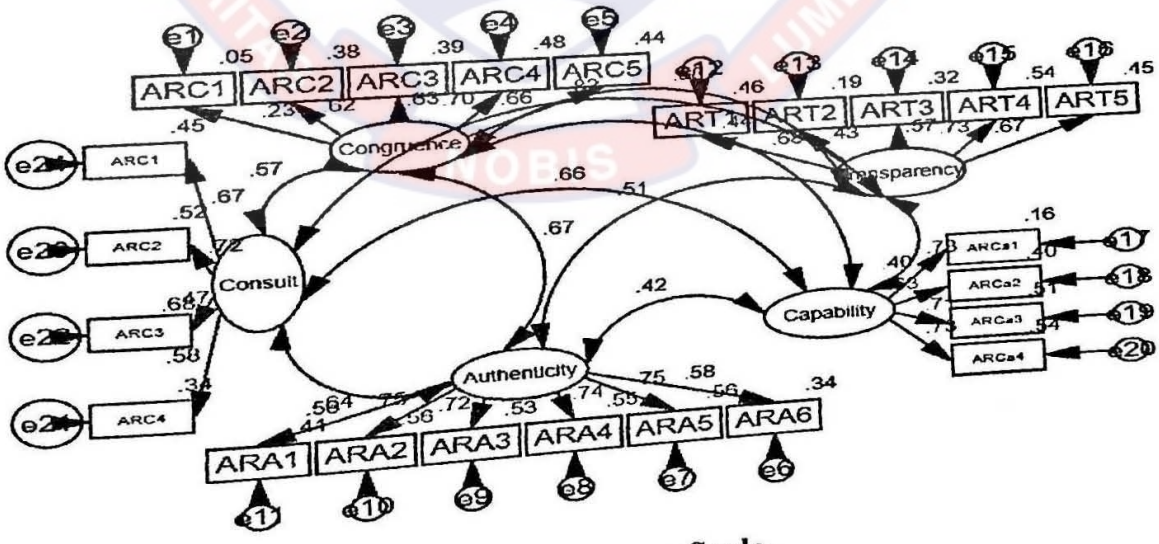

Figure 3-Perceived Assessment Relevance Scale.

Test of Model Fit of Academic Hardiness Scale

Fitness of the model was examined in line with the data collected with the Academic Hardiness Scale. A summary of the results is recorded in Table 8.

Table 8-Model Fit Indices

Fit Index Category	Range	Recommended Index	Recorded Index
Absolute Fit Indices			
Chi-square ($\chi 2$)	--	Non-Sig	6.651
Goodness of Fit Index (GFI)	0-- 1	.90 or better	.91
Comparative Fit Indices			
Comparative Fit Index (CFI)	0—1	.90 or better	.86
Tucker-Lewis Index (TLI)	0—1	.90 or better	.84
Parsimonious Fit Indices			
Parsimony Comparative of Fit Index (PCFI)	0—1	.90 or better	.74

Significant ($\chi 2$) = indices above ± 2.0

The normed Chi-square ($\chi 2$) was 6.651, the Goodness of Fit (GFI) was .91, Comparative Fit Index (CFI) was .86 and Tucker-Lewis Index (TLI) was .84. The final fit which is, Parsimony Comparative of Fit Index (PCFI) recorded .74. Taking the Chi-square ($\chi 2$) test as an exception, all the explored indices met recommended threshold so model fit was seen as acceptable (Hair et al., 2010; Byrne, 2011) for data that were collected with Academic Hardiness Scale.

Validation of Academic Hardiness Scale (AHS)

For this segment, estimates that explain the validity of Academic Hardiness Scale are shown. A summary of the results is shown in Tables 8 and 9.

Table 9-Item Loadings, Reliability and Average Variance Extracted (AVE) of AHS

Dimensions	Items	Loading	Lower	Upper	P	AVE	Alpha
Commitment	HCom1	.757	.711	.797	.001	.39	.75
	HCom2	.797	.762	.827	.001		
	HCom3	.746	.705	.782	.001		
	HCom4	.674	.626	.718	.001		
	HCom5	.734	.692	.770	.001		
	HCom6	.645	.591	.695	.001		
	HCom7	.678	.626	.724	.001		
	HCom8	-.137*	-.188	-.083	.001		
	HCom9	.471	.411	.534	.001		
	HCom10	.190*	.135	.249	.001		
Control	HCon1	.637	.588	.684	.001	.53	.76
	HCon2	.795	.750	.835	.001		
	HCon3	.739	.691	.785	.001		
Challenge	HCh1	.566	.498	.634	.001	.22	.48
	HCh2	.063*	-.029	.154	.245		
	HCh3	.704	.636	.768	.001		
	HCh4	.517	.452	.577	.001		
	HCh5	.038*	-.051	.130	.467		

Questionnaire items, Q43-Q60, (see Appendix A); * Items to be discarded;

Overall alpha = .70.

Table 10-Discriminant Validity of AHS

Dimensions	Commitment	Control	Challenge
Commitment	(.62)*		
Control	-.09	(.73)*	
Challenge	-.03	.56	(.47)*

*Values in the parenthesis are square root of AVEs.

Results in Table 9 show that four of the items on the Academic Hardiness Scale did not contribute much in terms of measuring the construct of academic hardiness. The items were item 8 on the hardiness scale (grades aren't important to me) which recorded a factor loading of -.12, which is far below the recommended threshold of.50. Item 10 of the hardiness scale (i.e., I am more involved and interested in non-curricula activities as well) was also weak because of its factor loading of.19. Moreover, items 15, (i.e., I enjoy challenging or difficult courses) and 18 (I see difficult courses as the best way to improve one's knowledge) on the scale had factor loadings of.063 and.038, respectively, which were far below the recommended cut-off of.50 (Civelek, 2018). These items were dead wood in terms of their function and hence were deleted from the list of items on the scale. Apart from the four weak items, the rest of the items on the scale loaded well on the hardiness construct.

Table 9 further indicates that the first dimension, that is, commitment, had an AVE score of.39 while the third dimension, challenge, also had an AVE score of.22. In these dimensions, AVE's were below the threshold of.50 as per the Fornell and Larcker (1981) criterion. an indication that the aforementioned dimensions did not meet the criteria for convergence. The second dimension, control, had an AVE score of.53, which satisfied the criterion for convergent

validity. Using the same Fornell and Larcker (1981) criterion, discriminant validity was also inspected. Results in Table 10 show that commitment, control, and challenge had square roots of their AVE's (i.e., .62, .73, .47) greater than the inter-construct correlation of their respective columns. This is an indication of the presence of discriminant validity for the academic hardiness scale. In addition to the above indices, the instrument had a global internal consistency reliability of.70, which is an indication that the inter-item correlation of the entire scale was fairly good. Therefore, the implication of the indices as reported is that the academic hardiness scale, to an appreciable level, has the potency to measure the needed construct for the purposes of testing the hypothesised model. Figure 3 depicts the conceptual model of the academic hardiness scale.

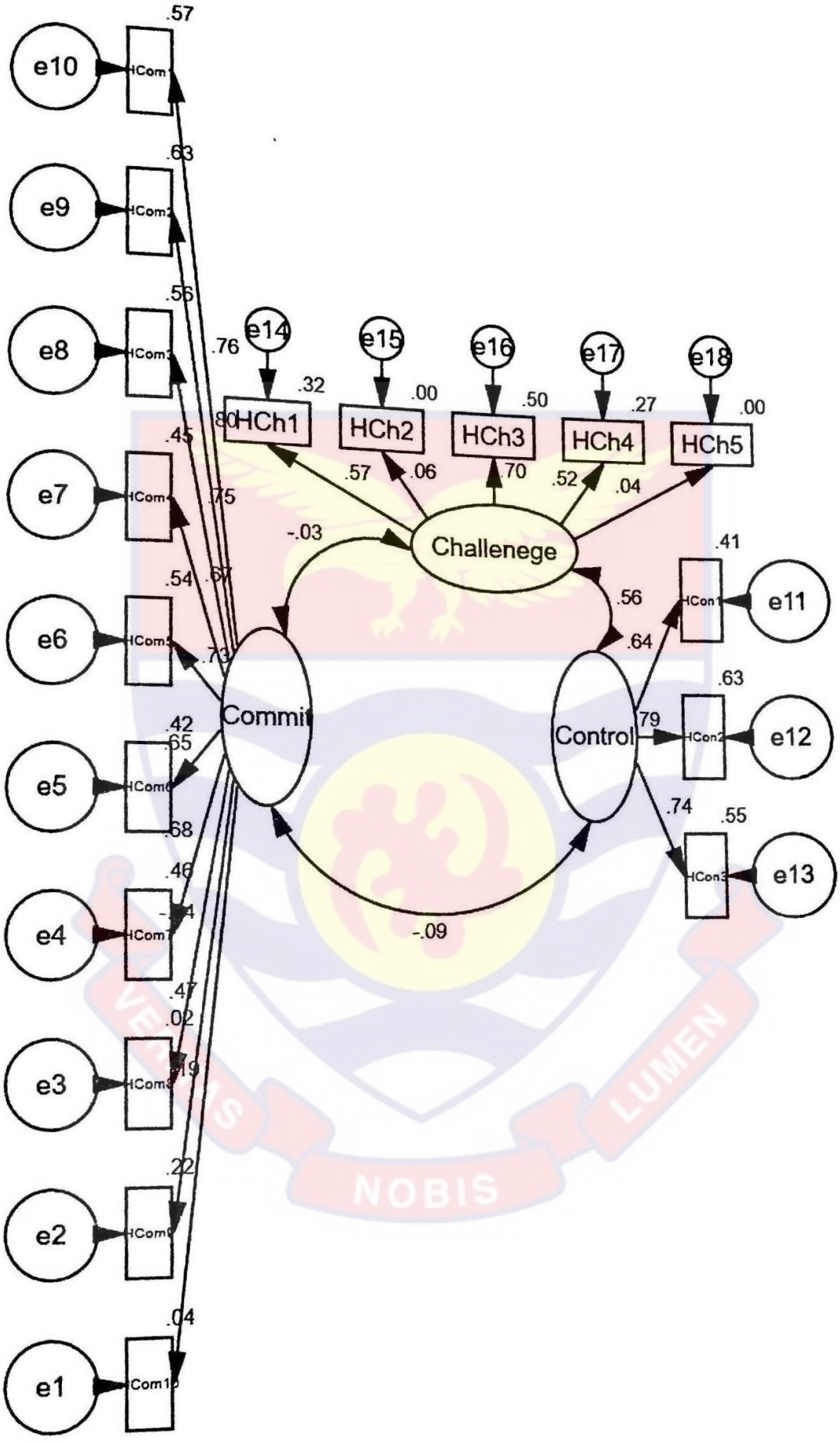

Figure 4-Academic Hardiness Scale

Test of Model Fit of Student Satisfaction Scale

Fitness of the model was examined in line with the data collected with the Students' Satisfaction Scale. A summary of the results is recorded in Table 11.

Table 11-Model Fit Indices

Fit Index Category	Range	Recommended Index	Recorded Index
Absolute Fit Indices			
Chi-square ($\chi 2$)	--	Non-Sig.	14.172
Goodness of Fit Index (GFI)	0-- 1	.90 or better	.96
Comparative Fit Indices			
Comparative Fit Index (CFI)	0—1	.90 or better	.93
Tucker-Lewis Index (TLI)	0—1	.90 or better	.89
Parsimonious Fit Indices			
Parsimony Comparative of Fit Index (PCFI)	0—1	.90 or better	.56

Significant ($\chi 2$) = indices above ± 2.0

Under the category of absolute fit indices, Chi-square ($\chi 2$) recorded 14.172, which is a significant test and a deviation from an acceptable fit. However, the Goodness of Fit Index (GFI) recorded.96, which indicates a good fit. For comparison indices, the Comparative Fit Index (CFI) recorded.93, which is within the recommended indices, whereas the counterpart Tucker-Lewis Index (TLI) also recorded.89, which is acceptable. Finally, the Parsimony Comparative Fit Index (PCFI) recorded.56, which reflects moderate fitness because it is within the range of 0 and 1. The implication of the fit indices recorded is that there is compliance of the theoretical model with the data

gathered with the students' satisfaction scale. This makes further statistical analysis of the theoretical model possible.

Validation of Students Satisfaction Scale (SSS)

This part of the write-up highlights the results on the validation of the students' satisfaction scale. A summary of the results is shown in Tables 12.

***Table 12*- Item Loadings, Reliability and Average Variance Extracted (AVE) of SSS**

Unidimensional	Items	Loading	Lower	Upper	P	Alpha
	SS1	.412	.343	.478	.001	.80
	SS2	.627	.582	.670	.001	
	SS3	.767	.728	.802	.001	
	SS4	.731	.683	.771	.001	
	SS5	.703	.659	.742	.001	
	SS6	.574	.519	.623	.001	

Questionnaire items, Q61-Q66, (see Appendix A); * Items to be discarded.

Due to the fact that the students' satisfaction scale was a unidimensional type, the estimation of discriminant and convergent validity was not possible; hence, only the factor loadings and the internal consistency reliability were inspected. Table 12 results show that after the confirmatory factor analysis, all the items on the students' satisfaction scale had factor loadings higher than the .50 threshold (Civelek, 2018), except for one item (i.e., item 1) which was approximately 0.5. None of the items were deleted because they all met the required threshold. Moreover, the internal consistency reliability was recorded as .80 which is acceptably higher. The implication is that the scale is viable in terms of measuring the construct of the students' satisfaction with educational services for the purposes of testing the hypothesised model. Figure 4 depicts the conceptual diagram of the students' satisfaction scale.

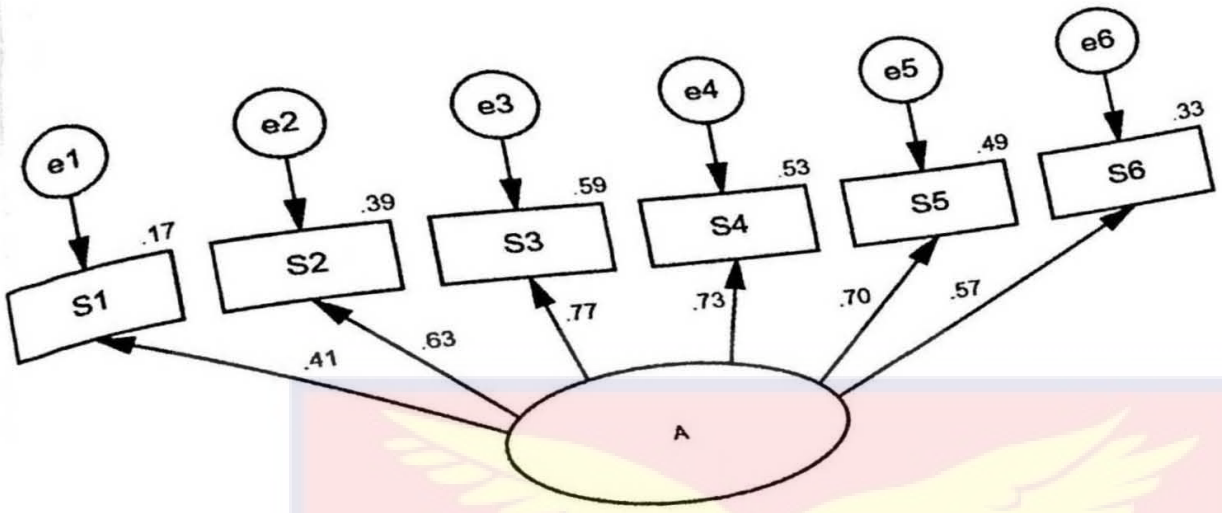

***Figure* 5-Students' Satisfaction Scale**

All the items that fell below the recommended threshold of 0.5 were removed. In this line, items 1, 17, and 21 of the PAR scale and items 8, 10, 15, and 18 of the AHS scale were removed from the questionnaire. In all, seven (7) items were removed from the total of sixty-eight (68) items in the questionnaire. None of the respondents used for the pilot testing exercise indicated on the questionnaire that any of the items were ambiguous. The questionnaire items were properly arranged under their respective sub-headings and printed for the main data collection exercise.

Ethical considerations

Ethical considerations in social science research primarily entail the notions of informed consent, confidentiality, and an ethical review board's assistance. Informed consent entails the researcher's willingness to give accurate information about the aims of the research to the respondents so that they can willingly accept to take part in the study (Angell, Bryman, Ashcroft, & Dixon-Woods, 2008). In this research, the researcher informed the respondents about the topic and purpose, and why the researcher was interested in using them. Further, the researcher asked all the respondents (university undergraduate students) whether they could be used for the study or not.

Confidentiality, on the other hand, also involves concealing information given. The high level of anonymity and confidentiality were both adhered to by the researcher as prescribed in the literature (Angell et al. 2008). In this regard, students were asked not to write their names on the questionnaires.

Data Collection Procedure

After the University of Cape Coast ethical review board's (IRB) approval of the data collection instruments, an introductory letter was taken from the Head of the Department of Education and Psychology, UCC, Cape Coast (see Appendix A) to the heads of department for the various departments of the two universities that were selected for the study. That enabled the researcher to get the needed attention, support, and cooperation from the students and lecturers whose time he used to collect the data. The questionnaire was administered by the researcher and three research assistants because the researcher wanted to ensure high accessibility and a high response rate.

The respondents chosen for the study were briefed on the purpose of the study and the need to read all instructions before responding to the items. Some students completed and returned their questionnaires on the same day after administering them. However, others returned theirs two days later. This was done to increase the return rate. The administration of the questionnaires and their collection took eight weeks to complete. In all, 1022 questionnaires were administered; however, 1019 were received, representing a 99.7% response rate.

Data Processing and Analysis

For simple identification, the completed surveys were serially numbered and coded. The responses, "strongly agree," "agree," "disagree, and "strongly disagree," were scored at 4, 3, 2, and 1 on a four-point Likert scale, respectively.

Those on five-point Likert were also rated as 5, the highest score. All negatively worded items were reverse coded. The mean and standard deviation were used to analyse data for research questions 1, 2, 3, and 4. This statistical procedure was used because the idea was to describe the state of affairs regarding the construct of interest that was measured.

Hypotheses 1, 2, 3, and 4 and 6 were tested using the Covariance-Based Structural Equation Modelling (CB-SEM) approach, specifically the Analysis of Moment Structures (AMOS). This advanced statistical procedure would help to test the model fit of the data as well as the hypotheses. Moreover, the CB-SEM procedure was preferred over the alternative "Variance-Based Structural Equation Modelling" method because of its capacity to confirm models as well as predict variables connected to the theoretical model. Moreover, hypotheses 5 was tested using an independent samples t-test. This statistical procedure was used because the researcher sought to find the mean difference between two independent groups (male and female) scores on a construct (i.e., students' satisfaction) measured on a four-point Likert scale.

CHAPTER FOUR

RESULT AND DISCUSSION

Introduction

This empirical work examined the impact of perceived assessment relevance, service quality, and academic hardiness on the students' satisfaction with educational services. This study was done by employing a descriptive cross-sectional design. The instrument used for data collection was a questionnaire. One thousand and twenty-two (1022) questionnaires were given out to participants to complete. However, 1019, representing 99.7%, were considered valid for the purpose of data analysis. The return rate satisfies the recommendation that at least 5% to 20% of the population size is satisfactory for generalisation of research findings (Amedahe & Asamoah-Gyimah, 2015). This particular chapter showcases the results and discussion of the study. As a convention, the background information of the study participants was presented first, and this was followed by the outcome of the research questions and, subsequently, the hypotheses.

Background Information of Participants

This part of the work submits results on the participants based on demographic distributions. The background information of the participants, such as gender, age-range and academic levels could be seen in Table 13.

Table 13- Distribution of Participants by Background Characteristics

Variable		Frequency	Percentages (%)
Gender			
	Male	613	60
	Female	406	40
	Total	1019	100
Age-range			
	Below 20yrs	153	15
	20-25	640	63
	26-30	145	14
	Above 30	81	8
	Total	1019	100
Academic Level			
	Level 300	704	69
	Level 400	315	31
	Total	1019	100

Source: Field Data, 2021.

Results in Table 13 indicate that a majority (n = 613, 60%) of the participants were males, while their counterpart females were in the minority (n = 406, 40%). The education faculties in recent times have been noted to be populated with more men than women. This might be as a result of the increasing interest of young men in the teaching profession as compared to young women. A majority (n = 640, 63%) of the participants were within the ages of 20 to 25 years, while a few (n = 81, 8%) of the participants had ages above 30 years. This is not surprising because most of the undergraduate students are people below the age of mid-adulthood (i.e., age 40). Since the nature of the study required that only students who had formally taken "an educational assessment course" be targeted, the concentration was on those in the upper levels (i.e., level 300 and 400). Results in Table 13 show that a

majority (n = 704, 69%) were level 300 education undergraduate students, while those in the final year were in the minority (n = 315, 31%). The implication is that students in the upper levels have been at the university for a significant number of years, long enough to be familiar with their institution's assessment regime as well as its various services.

Research Question One

What is the satisfaction level of students for educational services?

The research question sought to determine the participants' satisfaction level for the educational services that they received from their academic institutions. Participants were asked to respond to an adapted standardized scale with six standard items on indicators of satisfaction. The scale was a five-point Likert response type with 1 as the lowest score and 5 as the highest score. As a five-point Likert response scale used, a standard mean score of 3.0 was also used. A standard mean may depict average satisfaction or moderate satisfaction. Mean score above 3.0 was deemed as high level of satisfaction and mean score below 3.0 was considered as low level of satisfaction. A summary of the participants' level of satisfaction for educational services is presented in Table 13.

Table 14- Results on Satisfaction Level of Participants for Educational Services

Statements	Mean	Std.
My choice to enrol at my university was a wise one.	4.5	.78
The educational services (e.g. library services, security services, accommodation services etc) of my university is exactly what is needed for higher education studies.	3.7	1.3
I did the right thing by choosing my university because every academic activity in this institution is well structured.	3.9	1.1
I am pleased to be enrolled as a student at my university because there are enough facilities that support students learning.	3.6	1.2
I am enjoying studying at my university because both teaching and non-teaching staff are very supportive.	3.6	1.1
I am happy with my experience as a student at my university because I see myself acquiring the needed skills for the world of work.	4.2	.89
Mean of means	3.9	1.1

Source: Field Data (2021).

The overall mean satisfaction of participants, as seen in Table 14, was 3.9, SD = 1.1, out of 5. This is an indication that, generally, the participants' satisfaction with educational services was above average, which is considered high. Even though generally the participants indicated being satisfied with the academic services, the average standard deviation score, that is, 1.1, seems to suggest that participants' responses were heterogeneous in nature. The standard score rule of standard deviation units below 1.0 suggesting homogenous responses and units above 1.0 suggesting heterogeneous responses was used in this work.

Research Question Two

What is the level of academic hardiness for students of the selected universities?

The research question aimed at investigating the academic hardiness of students (i.e., participants) in the various universities selected for the study. An academic hardiness scale of 14 items, which has a four-point Likert response format, was administered to the participants. Because the response format of the scale was four-point with a maximum score of 4 and a minimum score of 1, a mean of 2.5 was used as the moderate/average level of hardiness. In this regard, mean scores above 2.5 were considered a higher level of hardiness and mean scores below 2.5 were seen as a lower level of hardiness. A summary of the participants' academic hardiness levels is shown in Table 15.

Table 15- Results on Participants' Level of Academic Hardiness

Sub-dimension	Number of items	Mean	*SD*
Commitment	8	3.4	.66
Control	3	2.6	.96
Challenge	3	2.8	.94
Mean of means		2.9	.85

Source: Field Data (2021)

The grand mean of the participants' responses as far as academic hardiness was concerned was 2.9, SD =.85, out of a total score of 4. This is an indication that the participants were generally hardy in nature. This is because of the high hardiness mean scores shown in Table 15. Furthermore, when the computed mean scores of the various dimensions are taken into account, the results in Table 15 show that the participants demonstrated a high level of commitment (M = 3.4, SD =.66). The implication is that participants got very much involved in the academic task. This was followed by the participants'

level of challenge also being high (M = 2.8, SD =.94). This means that while on an academic programme, the participants were able to effectively deal with difficulties that confronted them. The participants also had a little above average score for the control dimension (M = 2.6, SD =.96), which suggests that at each point in time, while on the academic programme, they were able to make choices or take decisions that helped them to succeed academically. While participants were rated high on these three dimensions, the obvious indication was that they were hardy or resilient and managed academic stress quite well.

Research Question Three

What is the perception of students regarding the relevance of the assessment regime of their universities?

For this research question, the idea was to examine the students' perceptions of the relevance of the assessment practises of their academic institution. To solicit information on this research question, the participants were administered a 23-item student perception of assessment scale to answer. The response format of the scale was a four-point Likert type, which has a maximum score of 4 and a minimum score of 1. For interpretation purposes, the standard mean score used was 2.5. Since all the items on the scale were positively worded, the mean of a mean score that is above the 2.5 threshold may suggest a positive perception, while the mean of a mean score below 2.5 stands for a negative perception of the assessment. A summary of the respondents' responses is presented in Table 16.

Table 16- Results on Participants Perception of Assessment Relevance

Sub-dimension	Number of items	Mean	*SD*
Congruence with planned learning.	4	3.0	.74
Authenticity.	6	3.1	.74
Student consultation.	4	2.8	.86
Transparency.	5	2.9	.79
Student capability.	4	2.7	.87
Mean of means		2.9	.80

Source: Field Data (2021)

After the participants' responses were analysed, Table 16 shows that the mean of mean for the entire scale was 2.9, SD =.80, out of a total score of 4. Since the mean of means score 2.9 is higher than the standard mean of 2.5, it can be said that the participants had a positive perception of the assessment practises of the selected universities. In addition, computed sub-dimensional means show that the participants had a good view of how assessment was done in their universities. For instance, on the first sub-dimension, which was about congruence with planned learning, the participants had a positive view on it (M = 3.0, SD =.74). In congruence with the planned learning dimension, the participants, for example, admitted that assessment procedures in their university measured what they had done in class and not what they had not done. In the second dimension, participants had a positive perception of the authenticity of their university's assessment regime. On authenticity, participants admitted that some assessment tasks that they experienced in school demanded that they apply their learning in real-life situations and to solve real-life problems. Furthermore, the participants agreed that their lecturers consulted them before any assessment encounter to inform them of the format and how

the results would be used (M = 2.8, SD =.86). For this dimension, the participants agreed that they were aware of the assessment format used by their lecturers and how their assessment scripts were marked.

The fourth sub-dimension was on transparency, and participants shared the view that the assessment processes that they encountered in their universities were transparent. In this regard, the participants agreed with the statement, "myself and my classmates are always informed on the topics that we will be assessed on." On the last sub-dimension, the participants had a perception that their university's assessment took into consideration the students' capabilities (M = 2.7, SD =.87). For emphasis, questionnaire responses appear to indicate that participants agreed (M = 2.7, SD =.87) that they were mostly given assessment tasks that suited their abilities. Since the participants had a positive view on all the sub-dimensions of the assessment scale that reflected 'relevance', it can be concluded that the participants saw their university's assessment to be good and relevant for their training as prospective education professionals.

Research Question Four

What is the perception of students about service quality of the selected universities?

The research question sought to explore the participants' perception of service quality in their academic institutions. For this question, a 15-item higher education service quality scale was administered to the participants to complete. The instrument was a five-point Likert type of response scale, with 1 as the minimum score and 5 as the maximum score. For the purposes of interpretation, since the response format was of the five-point Likert type, a mean of 3.0 was used as the standard average mean. In this regard, a mean score above 3.0 was

interpreted as high service quality, specifically, 3.0 for moderate or average service quality, while a mean score below 3.0 was judged to be poor service.

Once again, for purposes of interpretation, functional quality refers to the quality of administrative, academic, and related activities (over behaviours of staff) as well as infrastructure. However, transformational quality focuses on the outcome of an educational experience, that is, whether or not a person has acquired some amount of relevant skills for a profession even before he or she completes the programme.

Table 17- Results on Participants' Perception about Service Quality

Sub-dimension	Number of items	Mean	*SD*
Functional Quality	9	3.8	.91
Transformational Quality	6	4.2	.81
Mean of means		4.0	.86

Source: Field Data (2021)

Results in Table 17 show that participants' perceptions of functional quality were good (M = 3.8, SD =.91). The implication is that the participants rated the quality level of their university's administrative processes, infrastructure, curriculum, and learning environment as being high. On the second dimension of quality, once again, results in Table 17 indicate that the participants saw their university's transformational quality as good (M = 4.2, SD =.81). Regarding the transformational quality dimension, respondents had the view that their universities had enabled them to be self-confident, think critically, and acquire problem-solving skills that would be beneficial for the teaching job. Hence, the mean of mean scores (M = 4.0, SD =.86) suggested

that the participants' perception of the quality level of the educational services that they received was good.

Testing of the Study Hypotheses

This study tested five hypotheses. Prior to the testing of the hypotheses, one of the key fundamental assumption of all parametric tests, that is, the test of normality assumption was examined. In line with this assumption, median, 5% trimmed mean, mean, skewness as well as normal Q-Q plot were inspected. A summary of the results is presented in Table 18.

Table 18-Normality Assumption Test on Variables

Parameters	Service Quality	Perceived assessment relevance	Academic hardiness	Students satisfaction
5% Trimmed mean	60.00	70.74	55.78	23.84
Mean	59.09	70.63	55.76	23.57
Median	60.00	70.00	56.00	24.00
Skewness	-.819	-.159	-.190	-.781
Standard Deviation	8.19	10.44	5.93	4.56
Std. Error	.257	.326	.186	.143

As shown in Table 18, the 5% trimmed mean, median, and mean statistics for all the variables, that is, service quality, perceived assessment relevance, academic hardiness, and satisfaction, were approximately equal. The implication is that the distribution of values of the aforementioned key variables was symmetrically distributed. Moreover, all the skewness statistics were within the recommended range of +1 and -1, and to this end, the data is seen as symmetrical. Furthermore, the normal Q-Q plots for all the variables were inspected. The residual plots for all the variables were closer to the diagonal line (refer to Appendix B). This implies that the data set was symmetrically distributed. As a way of further enhancing the precision of the hypothesis testing

procedure, the data was bootstrapped with 5000 bootstrap samples. The approach was to cater for all unforeseen anomalies in the data set.

Hypothesis 1

H_0: Service quality does not significantly predict students' satisfaction of educational services.

H_1: Service quality significantly predicts students' satisfaction of educational services.

The hypothesis sought to investigate the impact of service quality on the students' satisfaction with educational services. The hypothesis was tested using covariance-based SEM, specifically Analysis of Moment Structures (AMOS) path analysis with 5000 bootstrap samples. The approach makes use of bias-corrected accelerated confidence intervals. The results were interpreted in line with the calculated confidence intervals. In this case, for a result to be statistically significant, the bootstrap lower and upper confidence intervals should not include zero (0). The implication is that the regression coefficient cannot be zero. In this direction, both lower and upper intervals should possess the same sign: "negative" and "negative" or "positive" and "positive", ('-, -,' or '+, +'). The exogenous variable (predictor) was the service quality, and the endogenous variable (criterion) was satisfaction with educational services. Both variables were measured on a continuum.

Table 19 and Figure 6.

Table 19- Structural Regression Model for Service Quality

Model	B	Std. Error	CR	95% Confidence Interval Lower	Upper
(Constant)	67.067	2.973	22.561	59.677	76.236
S_Qual→ Stud_Satis.	.29	.015	19.084	.451	.570

*Significant, $p<.05$, $R= .51$; $R^2 = .26$

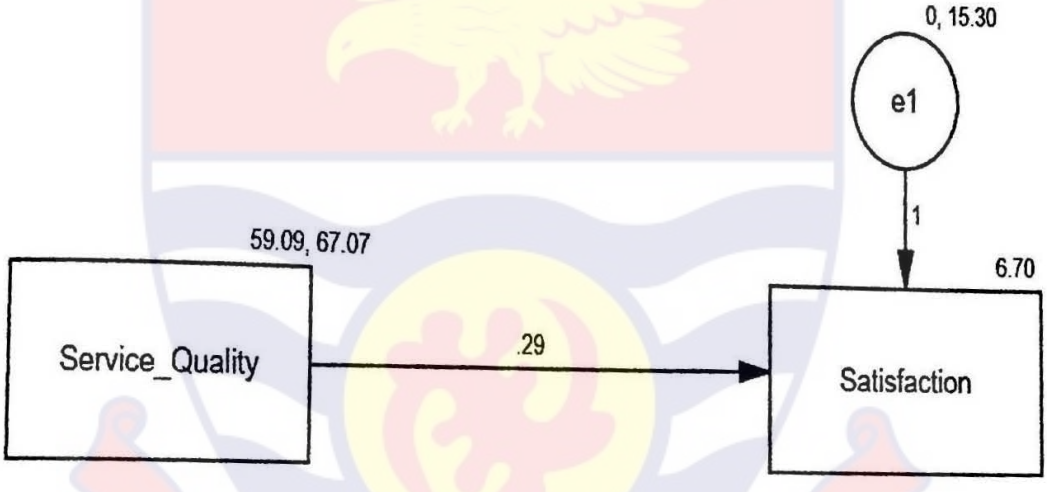

***Figure 6*- Service Quality Predict Satisfaction**

Figure 6 shows that service quality as a variable predicts the students' satisfaction with educational services by.29, with an error variance of 67.07 for service quality and 15.30 for the students' satisfaction variable. Table 18 indicates the summary of the prediction test.

Table 19 further indicates that service quality is a significant [B =.29, Boot 95% CI (.451, .570)] predictor of the students' satisfaction with educational services. The result (B =.29) suggests that service quality positively explains the students' satisfaction with educational services. The implication is that a unit increase in service quality would lead to a.29 increase in the students'

satisfaction with educational services. In this respect, it can be inferred that better (i.e., higher) services rendered in an academic institution may lead to an increase in student satisfaction within the academic institution. In addition, the data indicates that service quality explains 26% of the variance in the students' satisfaction with educational services. Based on the results of this study, the statistical hypothesis that says that "service quality does not significantly predict the students' satisfaction with educational services" was rejected in favour of the alternative hypothesis.

Hypothesis 2

H_0: Academic hardiness does not significantly predict students' satisfaction of educational services.

H_1: Academic hardiness significantly predict students' satisfaction of educational services.

This particular hypothesis sought to examine whether the academic hardiness of participants would predict their satisfaction with educational services. Covariance-based SEM (i.e., AMOS) with 5000 bootstrap samples and bias-corrected accelerated confidence intervals was used. Exogenous variables were the hypothetical sub-dimensions of academic hardiness (i.e., commitment, control, and challenge), and the students' satisfaction with educational services was the endogenous variable. All the variables were measured on a continuum. A summary of the analysis is shown in Table 20 and Figure 7.

As indicated earlier, the objective of examining how personality characteristics, that is, hardiness, affect the students' satisfaction with educational services. Results of the path analysis diagram of Figure 7 show that the commitment dimension of hardiness predicts the students' satisfaction with

educational services by.34; the control dimension of hardiness predicts the students' satisfaction with educational services by -.04 whereas challenge dimension of hardiness predicts the students' satisfaction with educational services by.32. The error variance of all the variables on the endogenous variable, that is, the students' satisfaction with educational services, was 18.11. A summary of the rest of the results is shown in Table 20.

Results in Table 20 show that commitment, control, and challenge traits that form hardiness personality characteristics jointly explain 13% of the variances in the students' satisfaction with educational services. From the path analysis, only the commitment dimension of hardiness [B =.34, Boot 95% CI (.277, .401)] and the challenge dimension [B =.32, Boot 95% CI (.225, .411)] were significant predictors of the students' satisfaction with educational services. On the contrary, the control trait of hardiness was not a significant predictor of the students' satisfaction with educational services [B = -.04, Boot 95% CI (-.142, .066)]. Essentially, a unit increase in a student's commitment to academic tasks as a function of one's trait leads to a.34 increase in satisfaction level. A unit more increase in the desire to change one's situation for good (challenge) may increase the students' satisfaction with services by.32. The implication is that students who have the 'will power' to be highly involved in every academic event, regardless of its difficulty (i.e., commitment trait) and/or the inner power to see stress as a normal part of life and to take advantage of it (i.e., challenge trait) are more likely to be satisfied with their academic institution's educational services.

On the contrary, the data also showed that an increase in the control dimension of hardiness, rather leads to -.04 decrease in the students' satisfaction with educational services. The implication is that a student possessing the willpower to manage relevant life issues through the application of knowledge, imagination, and good choices (i.e., control trait) may not necessarily be satisfied with educational services. In this respect, at least an increased trait of commitment and/or challenge, even if not possessing all three traits of hardiness, plays a crucial role in explaining the students' satisfaction with educational services. Based on the foregoing results, the study rejects the null hypothesis that says that "Academic hardiness does significantly predict students' satisfaction with educational services" in favour of the alternative hypothesis.

Table 20- Structural Regression Model for Academic Hardiness

				95% Confidence Interval	
Model	B	Std. Error	CR	Lower	Upper
(Constant)	7.954	1.338	5.945	5.625	10.290
HCom.→ Stud_Satis.	.34	.036	9.427	.277	.401
HCon.→ Stud_Satis.	-.04	.059	-.682	-.142	.066
HCha.→ Stud_Satis.	.32	.053	5.972	.225	.411

*Significant, $p<.05$, $R= .36$; $R^2 = .13$

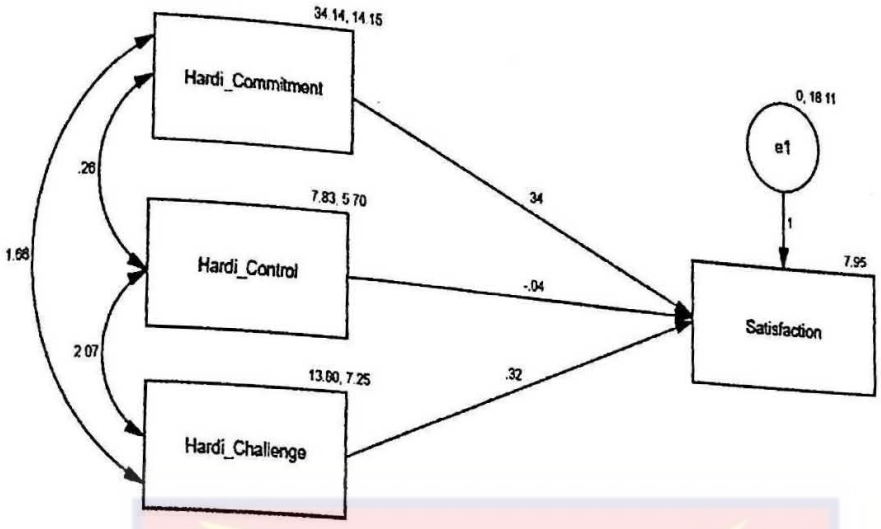

***Figure 7*-Hardiness Predicting Satisfaction**

Hypothesis 3

H_0: Perceived assessment relevance does not significantly predict students' satisfaction of educational services.

H_1: Perceived assessment relevance significantly predict students' satisfaction of educational services.

Hypothesis 3 sought to explore whether students perception of assessment relevance affect their satisfaction of educational services. Testing of the hypothesis was done with the use of covariance-based SEM (i.e., AMOS) with 5000 bootstrap samples and bias corrected accelerated confidence intervals. Exogenous variable in this model was perceived academic relevance while the endogenous variable was the students' satisfaction of educational services. A summary of the analysis is shown in Table 21 and Figure 8.

Table 21- Structural Regression Model for Assessment Relevance

Model	B	Std. Error	CR	95% Confidence Interval	
				Lower	Upper
(Constant)	108.831	4.824	22.561	99.716	118.567
Assess→ Stud_Satis.	.22	.012	18.264	.447	.544

*Significant, $p<.05$, $R= .50$; $R^2 = .25$

***Figure 8*-Assessment Relevance Predicting Satisfaction**

From Figure 8, the perception of assessment relevance predicts the students' satisfaction with educational services by.22, with an error variance of 108.83 for assessment relevance and an error variance of 15.64 for satisfaction. A summary of the rest of the processed information is shown in Table 21.

Table 21 results show that the students' perception of assessment relevance explains 25% of the variances in satisfaction of educational services. Perceived assessment relevance significantly predicted [B =.22, Boot 95% CI (.447, .544)] of the students' satisfaction with educational services. This is to say that the perception that an assessment regime is relevant positively explains the students' level of satisfaction. From the results in Table 21, a unit increase in a student's perception that the assessment culture of his or her university is meaningful leads to a.22 increase in his or her satisfaction level. Obviously,

based on the outcome of the study, it can be said that when the perception of assessment relevance increases, the students' satisfaction also increases. The implication is that in a university where students think of the assessment regime of the school as being that which causes them to apply their knowledge to solving real-life problems and not just promoting rote learning (i.e., relevant assessment), their satisfaction level increases. Based on the results of the study, the study rejects the statistical hypothesis that says that "perceived assessment relevance does not significantly predict the students' satisfaction with educational services" in favour of the alternative hypothesis.

Hypothesis 4

H_0: Academic hardiness does not significantly mediate the relationship between service quality and students' satisfaction of educational services.

H_1: Academic hardiness significantly mediate the relationship between service quality and students' satisfaction of educational services.

This hypothesis sought to examine the indirect effect of service quality on satisfaction with educational services through the academic hardiness of participants. Path analysis of covariance-based SEM, specifically, AMOS with 5000 bootstrap samples and bias corrected accelerated confidence interval, was utilized. Service quality was the exogenous (predictor) variable (i.e., X), as the satisfaction of educational services was the endogenous (criterion) variable (i.e., Y) while academic hardiness served as the mediating variable (i.e., M). A summary of the analysis is shown in Table 22 and Figure 9.

Table 22- Indirect Effect, Direct Effect and Total Effect of Academic Hardiness

				Confidence Interval	
	Effect	BSE	p	Lower Limit	Upper Limit
Total effect of X on Y					
Total effect 1	.027	.036	.001	.024	.063
Total effect 2	.25	.031	.899	-.016	.014
Total effect 3	.26	.036	.001	.115	.319
Direct effect of X on Y	.25	.015	.001	.395	.502

	Effect	*BSE*	*BootLLCI*	*BootULCI*
Total Indirect effect of X on Y				
Indirect effect 1	.025	.006	.014	.038
Indirect effect 2	.000	.001	-.001	.001
Indirect effect 3	.010	.004	.004	.019

**Significant @ .05 Alpha level, X-service Quality, Y-satisfaction, M-hardiness. 1-indirect effect through Hardi_com, 2-indirect effect through Hardi_con, 3-indirect effect through Hardi_chal.*

From Table 22, the direct effect of service quality on the students' satisfaction was statistically significant, B = .25, *Boot 95%CI* (.395, .502). That is, a unit increase of service quality leads to a .25 increase in the students' satisfaction of educational services. The implication is that, in the absence of the mediator variables (i.e., Hardi_Commitment, Hardi_Control, and Hardi_Challenge), an increase in service quality is enough to increase the students' satisfaction of educational services.

Moreover, Table 22 shows that, aside from the control dimension of hardiness, B = .000, Boot 95% CI (-.001, .001), commitment, B = .025, Boot 95% CI (.014, .038) and challenge, B = .010, Boot 95% CI (.004, .019) in a parallel form significantly mediate service quality and the students' satisfaction with educational services. This implies that commitment and challenge dimensions of hardiness explains the relationship between service quality and students' satisfaction.

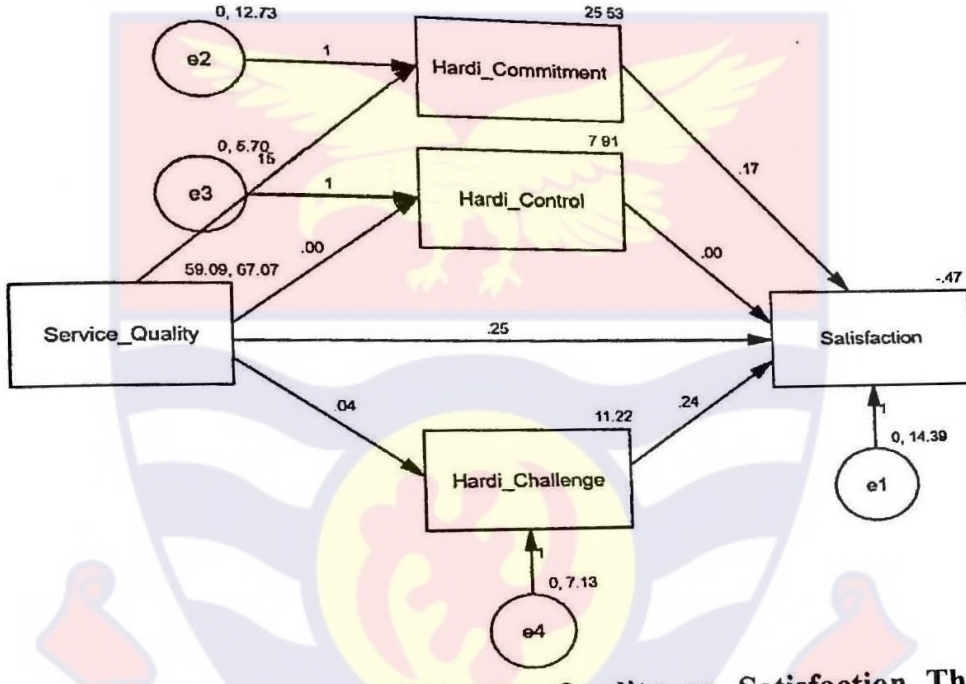

Figure 9 **–Indirect effect of Service Quality on Satisfaction Through Hardiness**

Hypothesis 5

H_0: There is no significant difference between male and female students on satisfaction of educational services.

H_1: There is a significant difference between male and female students on satisfaction of educational services.

The research hypothesis sought to investigate gender differences in participant satisfaction with educational services. The questionnaire was used in the measurement of data to assess this hypothesis. Aside from gender, which

The difference was tested by using an independent sample t-test to compare the mean scores of male and female respondents. The difference was tested using 0.05 alpha level. The data was also checked for the "equality of variance" assumption. This was done by inspecting the Levene's test for equality of variances. This actually tests whether the variation of scores for the two groups (male and female) is the same. After thorough inspection, the significance level of Levene's test was (p =.001). This shows that the equality of variances assumption was violated. Hence, the equal variances not assumed indices were used.

Table 23- Independent Samples t-test on Differences of Participants Satisfaction

Group	N	Mean	SD	t	df	p-value
Male	613	23.21	4.78	-3.223	1017	.001
Female	406	24.12	4.14			

Source: Field survey (2021); $\eta^2 = -.0003$

Results from Table 23 show that the independent samples t-test for equality of means shows a statistically significant difference t (1017) =-3.223, p =.001, in the mean scores of participants. This implies that participants differed significantly with respect to their satisfaction with educational services. That is, female participants were found to be more satisfied (M = 24.12, SD = 4.14) than their counterpart males (M = 23.21, SD = 4.78). However, the magnitude of the difference (i.e., determined by Eta square) in the mean scores was very small, $\eta^2 = -.000317$.

Hypothesis 6

H_0: Assessment relevance, hardiness and service quality will not jointly predict students' satisfaction of educational services.

H_1: Assessment relevance, hardiness and service quality will jointly predict students' satisfaction of educational services.

This hypothesis aimed at determining whether the students' hardiness, perception of the relevance of assessment and service quality would have a combined effect on the satisfaction of educational services. Path analysis of covariance-based SEM, specifically AMOS with 5000 bootstrap samples and bias corrected accelerated confidence interval, was utilized. Perceived assessment relevance, hardiness, and service quality were the exogenous variables, whereas satisfaction was the endogenous variable. All the variables were measured on a standard scale and on a continuous basis. A summary of the analysis is shown in Table 24 and Figure 10.

Table 24- Structural Regression Model for Combine Effect of Perceived Assessment Relevance, Academic Hardiness and Service Quality.

				95% Confidence Interval	
Model	B	Std. Error	CR	Lower	Upper
(Constant)	-1.802	1.274	-1.414	-4.447	.781
SQ→ Stud_Satis.	.175	.018	9.909	.130	.227
PAR.→ Stud_Satis.	.111	.014	7.869	.076	.146
Hcom→ Stud_Satis.	.150	.033	4.565	.080	.222
Hcon→ Stud_Satis.	-.016	.051	-.307	-.119	.094
Hcha→ Stud_Satis.	.160	.047	3.378	.061	.259

*Significant, $p<.05$, $R= .59$; $R^2 = .35$

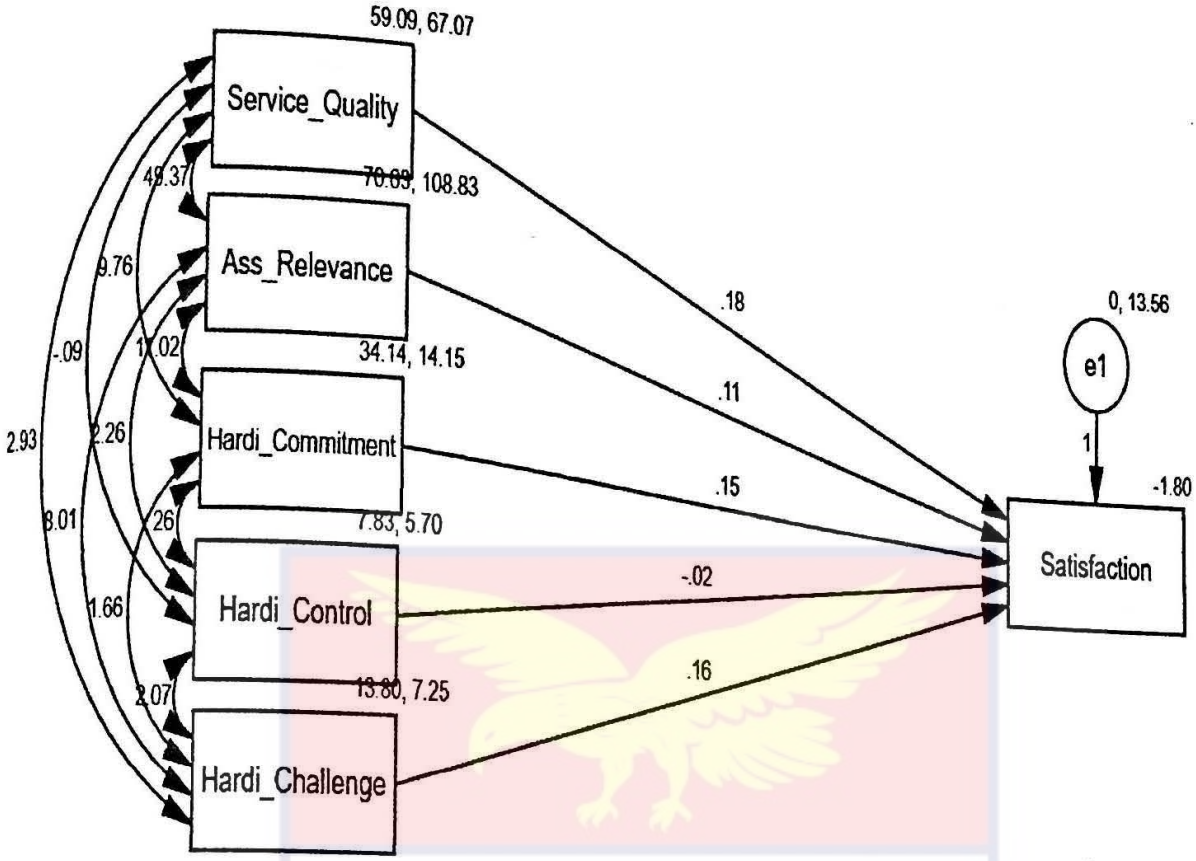

***Figure 10*-Combine effect of Exogenous variables on Satisfaction**

Results in Figure 10 show that service quality in the model predicts satisfaction by.18, with an error variance of 67.07 for service quality and 13.56 for satisfaction of educational services. Assessment relevance perception predicted satisfaction of educational services by.11, with an error variance of 108.83 for assessment relevance perception and the same error variance for the endogenous variable quoted earlier. With respect to the hardiness variable dimensions in the model, the first dimension predicted, that is, commitment predicted satisfaction by.15, with an error variance of 14.15. The second dimension (i.e., control) predicted satisfaction by -.02, with 5.70 error variance for control. The last dimension (i.e., challenge) predicted satisfaction by.16, with an error variance of 7.25 for challenge. Details of the rest of the path analysis are shown in Table 24.

results indicate that service quality, assessment relevance perception, and all the three hardiness construct dimensions (i.e., commitment, control, and challenge) together explained 35% of the total variances in the satisfaction of educational services. The percentage effect of the combination of the exogenous variables on the endogenous variable is bigger than the individual effect of the exogenous variables. The implication is that when hardy students are provided with high-quality academic services and meaningful assessment, the result is high student satisfaction. Further analysis of the data revealed that aside from the control dimension of academic hardiness B = -.02, Boot 95% CI (-.119,.094), all the other variables in the model, that is, service quality, B =.18, *Boot 95% CI* (.130, .227); assessment relevant perception, B =.11, Boot 95% CI (.076, .146); hardy commitment dimension, B =.15, Boot 95% CI (.080,.222); and hardy challenge dimension, B =.16, Boot 95% CI (.061, .259) significantly predicted the satisfaction of educational services. For hardiness control dimension inverse effect on satisfaction, the implication is that one's ability to handle life issues through the transfer of knowledge does not guarantee one's satisfaction within an educational context. This is even daring when one does not possess the ability to commit oneself to an academic task and exhibit a trait of challenge.

Discussion

This aspect of the study discusses the outcome of the investigation. The following are the order in which the discussion has been organized:

1. Students' satisfaction level of educational services
2. Students' academic hardiness level
3. Students' perception about universities assessment relevance

4. Service quality level of the selected universities as reported by participants
5. Service quality impact on the students' satisfaction
6. Academic hardiness impact on the students' satisfaction
7. Perceived assessment relevance impact on the students' satisfaction
8. Mediating effect of academic hardiness on the connection between students' satisfaction and service quality
9. Differences between male and female students' satisfaction of educational services
10. Combine effect of assessment relevance, hardiness and service quality on the students' satisfaction of educational services

Students' Satisfaction level of Educational Services

The aim of this particular objective was to investigate the participants' level of satisfaction with educational services provided by universities. The finding of the study revealed that the participants' satisfaction with educational services was above average, which is considered high. The finding of this study has implications for students' learning and progress on the one hand and the institution on the other hand. Satisfied students are more likely to be committed and continue with their studies than unsatisfied students, who are also more likely to quit their studies. Furthermore, satisfied students are more likely to put forth effort in academic tasks and related activities. For an academic institution, the students' satisfaction with educational services tells how efficient and effective that institution is. This may mean that an academic institution is able to meet the varied needs of its students.

Generally, the services of the universities that were investigated, at least anecdotal information based on the experiences of the researcher as a student of UCC and also from the experiences of the other research assistants who were students of UEW, suggest that the services covered a lot of relevant areas. For example, the core services that universities render include academic (instructional and related) services, library services, administrative services, counselling services, and security services.

The finding of the study that the participants had a high level of satisfaction with educational services aligns with previous studies (Kara & DeShield, 2004; Jamelske, 2009; Karna & Julin, 2015; Wilkins & Balakrishnan, 2013). The outcome of the aforementioned studies equally found participants (i.e., students) to be satisfied with educational services. The only difference between some of these studies and the current study has to do with the context and the sample size that were used. For example, Wilkins and Balakrishnan (2013), for example, conducted their study in the United Arab Emirate (UAE) with 247 students and had similar results. Students, as primary customers of an educational institution, are seen as satisfied when some aspects of their needs are met. The foregoing assertion aligns with the expectancy-disconfirmation theory by Oliver (1977). The theory holds that customer satisfaction or dissatisfaction comes from his/her comparison of performance with predetermined standards. With certainty, student satisfaction will increase when academic resources (both electronic and non-electronic), institutional infrastructure, and other administrative services meet the expectations of students.

Students' Academic Hardiness Level

Going into the study, the idea was to examine the academic hardiness level of participants. In line with the objective, the study revealed that participants were generally hardy in nature. The obvious indication from the data is that participants are resilient and manage academic stress quite well. The implication is that hardy traits in students promote resilience, personal growth, and well-being. Hardiness generally ignites coping actions and responses that energise a person to act purposefully. As the academic setting is filled with stress, participants are more likely to be resilient and active in facing stressful and challenging situations.

This study's finding that the participants were hardy (i.e., rated high on the hardiness scale) is consistent with previous research findings (Cole et al., 2004; Maddi et al., 2009; Banishek & Lopez, 2001; Bartone et al., 2008; Eccles et al., 2004). The high level of the participants' hardiness suggests that participants work harder and make personal sacrifices for grades. With a high hardiness score, students are more likely to demonstrate a higher level of motivation for academic tasks regardless of whether a student's performance is encouraging or not (Cole et al., 2004). Again, with a high trait of academic hardiness, students would have academic self-efficacy and a positive attitude toward university life (Maddi et al., 2009). Even though this present study did not directly investigate the connection between academic self-efficacy and/or positive attitudes and hardiness, it draws on the idea that hardy people are self-motivated and focused, are positive and have appreciable efficacy.

Students' Perception about Universities Assessment Relevance

The objective of the research question was to ascertain the students' perception of the participant university's assessment practises and whether or not they regard them as relevant. Relevant assessment practises in this context may mean assessment practises that are based on five thematic areas: assessment has congruence with planned learning; authenticity; students' consultation; transparency; and assessment reflects the capabilities of students. In line with the aforementioned objective, the study discovered that the participants had a positive perception of the assessment practises of the selected universities. This is to say that participants regarded the assessment practises of their universities as relevant.

The results of this study are not surprising because my experience as a graduate student in assisting the invigilation of some of the education faculty quizzes and exams showed that the College of Education Studies of UCC faculty members use multiple procedures in assessing their students. For example, as some of the procedures allow the students to construct their own meaning or ideas to solve a problem (subjective type test), others require the students to select from a list of provided options where emphasis is laid on knowledge items (objective type items). Moreover, students at the higher level are also subjected to both micro and macro teaching as part of performance-based assessment that adds up to the assessment regime of the university. The assessment modes of the UCC are also not quite different from those of the UEW.

Essentially, students have a positive perception of the assessment practises of their universities because they feel that the assessments that are often given to them are in line with what they have been taught in class. Again, the positive perception might also emanate from the idea that, in most cases, education programmes (e.g., B.Ed Arts, B.Ed. Accounting, etc.), practical assessment methods (e.g., macro teaching, and topic presentations), help them to apply their learning to real-life situations. Further, when students have the idea of the assessment format and are given prior notice ahead of the testing date as well as the assessment results reflecting their capabilities, they would think of the assessment practises as relevant.

The findings of this study support several study findings in the literature (Alsadoon, 2017; Jawaid, Moosa, Jaleel & Ashraf, 2014; Holmes, 2015; Iannone & Simpson, 2013; Gulikers, Bastiaens, Kirschner & Kester, 2006). Most of these studies inquired about the undergraduate students' perceptions of their school's assessment. The aforementioned studies found that students had a positive perception of the assessment practise and also saw the same as relevant. For instance, Holmes (2015) explored undergraduate students' perceptions of the effectiveness of assessment in higher institutions. The study discovered that students had a positive perception of their university's assessment because it helped them to improve their learning. Also, Iannone and Simpson (2013) investigated undergraduate mathematics students' perceptions of assessment in an academic institution within the United Kingdom and concluded that learners perceived their school's assessment as an efficient discriminator of abilities. The authenticity and alignment of an assessment encounter is paramount in determining the relevance of an assessment regime.

In the case of Gulikers, Bastiaens, Kirschner and Kester's (2006) study, the connection between perceptions of alignment and authenticity of assessment and learning outcome was investigated. Gulikers et al. (2006) discovered that the students' perception of assessment was good and thought that their school's assessment aligned with classroom instruction.

The implication of this current study finding is that students' learning within universities is likely to be improved due to the positive perception of students on assessment. A major role of assessment in education is that it drives students' learning (Nitko, 2001). Where assessment tends to only measure content knowledge, students also tend to adopt a shallow learning approach. Again, where assessment most measures comprehension, synthesis, and evaluation thinking skills, students, in a similar fashion, tend to adopt a deep learning approach (Struyven et al., 2002).

Service Quality Level of the Selected Universities as reported by Participants

The aim of the aforementioned objective was to ascertain participants' views on the service quality level of their universities. In the measurement of service quality, two major areas were considered: functional quality and transformational quality. Transformational quality concerns institutional facilities (such as lecture halls, libraries, etc.), administrative processes (both departmental and university-wide level), and support services. In line with the first dimension, the result indicated that students believed that there was functional quality. The second dimension, that is, transformational quality, concerns the outcome of educational experience. In this direction too, the participants believed that there was evidence of transformational quality. For

the respondents, "the universities have enabled them to think more critically as preservice teachers, become self-confident, and gain some amount of knowledge and skills for the teaching profession. Hence, the participants perceived the quality level of the educational services that they received to be good.

Perception of institutional service quality as found in this study has implications for the university's external image and enrolment. Students are the main customers of educational organisations where their perception of the organisation matters. The perception that customers have of an organisation greatly affects the wider environment within which the school is situated. If students largely perceive their school to provide quality educational services, the same idea flows to parents, relatives, and other people close to the individual, which ultimately spreads to the community and the nation as a whole. The spread of the perception of quality is what subsequently increases the institutions' enrolment for programmes (Ayliff & Wang, 2006). Quality service provision is an indication that the university is effective, competitive, and fit for purpose (Magd et al., 2003; Materu, 2007).

The finding of this study that the students perceive their university services to be of quality aligns with other empirical work in the service quality literature. Zakari (2016) explored the students' perceptions of service quality and its effects on their loyalty. Students perceived the services of the university to be of high quality. However, the ratings of quality of undergraduate students differed from those of postgraduate students. For this current study, only undergraduate students were used. Van, Schalkwyk and Steenkamp (2014) also investigated issues of service quality in some selected universities in South

Africa, where findings indicated that students perceived their institutions' services to be of high quality. In the same direction, Poturak (2014) examined the learners' perception of the quality of educational services by looking at academic, administrative, and other services. The participants of the study indicated that the services were of high quality. Conclusively, the study findings have shown that when there is adequate infrastructure and good administrative and academic services within the university, services are perceived to be of high quality. When educational services provided are of quality, students' learning conditions and acquisition of important skills (transformation). The finding aligns with the proposition of the Gronroos Model, which highlights the relevance of transformational quality in service quality measurement. This means that the presence of quality in an academic context should be measured not only by the presence of tangible objects, but also by how those tangibles assist individuals in acquiring relevant skills.

Service Quality Impact on Students' Satisfaction

The objective was to ascertain the predictive effect of service quality on the students' satisfaction. The results of the study revealed that service quality was a significant predictor of the students' satisfaction with educational services. Service quality explained about 26% of the variance in the students' satisfaction with educational services. The implication of the finding is that when the service quality of an academic setting increases, the satisfaction level of students also increases. Quality service provision has always been one of the driving forces for customer satisfaction. In the context of education and, for that matter, the institutions that were used for this study, it can be said that their services have improved and, hence, their students are satisfied. When an

institution's academic services, administrative services, and infrastructure are adequate and well provided, the students' satisfaction level automatically increases. The connection between quality services and satisfaction may also serve as a yardstick for management to evaluate the effectiveness and quality dynamics of the academic institution. When students' expectations are not met in terms of administrative services, academic services (such as teaching related activities), and infrastructure, they will be dissatisfied, which may serve as evidence of an ineffective system.

The findings of this study corroborate with other previous studies in the quality service literature (Mattah, Kwarteng & Mensah, 2018; Van, Schalkwyk & Steenkamp, 2014; Poturak, 2014; Kundi et al., 2014). For the purposes of emphasis, Kundi et al. (2014) examined the effect the learners' perception of service quality had on their satisfaction within the university. The study discovered that quality services significantly predicted the students' satisfaction. Even though the current study's finding and that of Kundi et al.'s study is the same, the difference between the two is that as the former made use of the HESQUAL instrument for the measurement of service quality, the latter made use of the SERVQUAL scale. Again, the former was conducted in Ghana as the latter was done in Pakistan.

Moreover, Asaduzzaman et al. (2013) explored service quality and student satisfaction among university students. The study found that learners' satisfaction of educational services had a significant connection with all the dimensions of the service quality scale. For Asaduzzaman et al. (2013), they were interested in the connection between the two variables, that is, service quality and satisfaction; however, the current study's focus was on th

predictive effect of service quality on the students' satisfaction. Both studies establish some link between the two variables, but the latter goes further by pointing out that service quality explains satisfaction by 26%. Also, as the former study was done in Bangladesh, the latter was done in Ghana.

Furthermore, Poturak (2014) examined the learners' perception of the quality of educational services and their satisfaction. The study results showed that learners' perceived service quality significantly affects their satisfaction. Even though Poturak's study and the current study differ in context, the substance of what was investigated was found to have the same result. Based on the veracity of these findings, the study concludes that current student satisfaction with educational services at the University of Cape Coast and the University of Education, Winneba was caused by improved service quality.

Academic Hardiness Impact on Students' Satisfaction

The aim of this particular objective was to determine the impact of academic hardiness on the satisfaction of students. In line with this objective, the study discovered that first and foremost, the commitment dimension positively predicted the students' satisfaction with educational services. Secondly, the challenge dimension also positively predicted the students' satisfaction. On the contrary, the control trait of hardiness was not a significant predictor of the students' satisfaction with educational services. Commitment, control, and challenge traits that form the hardiness personality type jointly explain 13% of the variances in the students' satisfaction with educational services. The finding leads to the rejection of the null hypothesis that says that academic hardiness does not significantly predict the students' satisfaction with educational services.

The implication of the findings is that an increase in the hardiness trait of commitment and/or challenge leads to an increase in the students' satisfaction with educational services. Hardiness is about the resilience of students to academic stress and struggles in pursuit of excellence. Hardy individuals interpret stress and difficult situations as normal features of academic life. In effect, hardy people are optimistic and possess a positive mindset that enables them to focus on possibilities and not impossibilities. The study discovered that participants had high levels of commitment and challenge that positively affected their satisfaction with educational services. An observed dominance of traits of purposefulness and an attitude of deeply involving oneself in academic activities (i.e., commitment), coupled with an attitude of taking initiatives and decisions that are novel that deal with their peculiar problems, has helped many of the participants to be satisfied in the face of many academic problems within the institutions that were investigated.

Maddi's (2006) study that reported that hardy individuals show an action pattern of coping with stressful circumstances to turn potential academic disasters into opportunities, which is exactly the position of these current study findings. Education programmes are equally regarded as stressful academic programs; however, participants were found to be satisfied because they were noted to be hardy.This is to say that participant satisfaction does not imply the absence of problems; however, the participants' tough nature made them adept at managing such stresses and problems.The impact of hardiness on the satisfaction of the participants may also mean that, to some extent, participants are creative and able to turn their circumstances to a level that gives them stability of mind and satisfaction (Lifton, Seay & Bushke, 2000).

Cole, Field, and Harris (2004) reported in an empirical study that students who reported having hardy attitudes were more motivated to learn class materials and more strongly committed to classes than those who reported being less hardy. The current study aligns with the Cole et al. study because, in the circumstances where the participants are satisfied because of their hardy nature, they are more likely to be motivated toward academic activities than their counterparts who are less hardy. In a different investigation, Bartone et al. (2008) revealed that United State Army trainees who were rated high on the hardiness scale had a higher chance of completing the training school. Even though the current research aim differed significantly from the foregoing study, the findings can be said to be similar. The predictive influence of hardiness on the participants' satisfaction may suggest that the satisfied individuals (i.e., students) are more likely to complete their programme as expected without any delay. The major difference between these studies relates to the context. As Bartone et al.'s study was conducted in the United States of America, the latter was done in Ghana. Lifton et al. (2006) discovered that students who graduated from university in the shortest possible time had academic hardiness scores above average, whereas students who took longer to complete or even dropped out had lower scores. Students dropped out of school when they had a high sense of dissatisfaction.

Perceived Assessment Relevance Impact on Students' Satisfaction

This aspect discusses findings of the study on the impact of the participants' perception of assessment relevance on satisfaction with educational services. The study discovered that perceived assessment relevance significantly predicted the students' satisfaction with educational services. The

overall perception of assessment relevance accounted for 25% of the variance in the students' satisfaction. This is to say that, in part, students get satisfied when they consider their university's assessment to be meaningful. The implication of the finding is that a good perception of the assessment of an academic institution leads to higher satisfaction. Therefore, the participants had a positive (higher) perception of their school's assessment, which has positively affected their satisfaction.

Assessment plays two critical instructional roles: it directs how and what teachers should teach, and it directs how learners should learn educational materials.In the first instance, teachers are able to know what to teach after a preliminary assessment of their students' behavior. The entering behaviour then instructs the teacher on how much of a specific content to teach and how to teach it.Meaningful assessment, therefore, is a great resource for teachers to get meaningful feedback to take meaningful instructional decisions (Nitko, 2001; Etsey, 2012). Assessments direct university students on the specific learning approach to take in order to succeed. When an academic institution predominantly uses assessment procedures (e.g., multiple-choice, True/False, essay tests, etc.) that basically measure lower learning skills like knowledge and comprehension, a majority of the students adopt a surface learning approach. However, an assessment regime that predominantly makes use of performance-based assessment (especially authentic) means that students automatically adopt a deep learning approach to succeed academically (Struyven et al., 2002).

According to Cavanagh, Waldrip, Romanoski, Dorman, and Fisher (2005), an assessment is said to be relevant (i.e., meaningful) when it takes into consideration five thematic areas: congruence with planned learning,

authenticity, student consultation, transparency, and student capabilities. When assessment tasks measure what is learnt in class (i.e., the objectives taught), then there is evidence of assessment being congruent with planned learning. For an assessment task to be authentic, it should require the students to apply what they've learnt to solve a real-life problem. Good assessment practises require that test takers know the nature of the assessment to be given at each point in time, how it will be scored, and how the results will be used. This is done by the test developer consciously giving such information to test takers, which is called student consultation. When test takers know what is required of them in an assessment in terms of the number of questions that they should answer and how they should respond, there is evidence of transparency. Finally, good assessment practises also require that the test developer take into consideration the task to be performed in line with the test taker's ability (student capability).

In the current study, the participants' responses indicated that lecturers follow all five thematic areas in their assessment practices. Based on the findings, the study can conclude that the University of Cape Coast and University of Education, Winneba, assessment tasks are educationally relevant and meaningful. Because of the meaningfulness of the assessment, the participants were satisfied. The current study finding of assessment relevance perception influencing the participants' satisfaction confirms several study findings in the satisfaction literature (Ozan, 2019; Yalman, Basaran & Gonen, 2016; Huang & Wang, 2012; Tozoglu, Tozoglu, Gurses & Dogar, 2004).

For purposes of emphasis, Ozan (2019) explored the impact of authentic assessment on the academic performance of preservice teachers. After data collection and thorough analysis, the findings showed that the preservice

teachers were more satisfied with the approach of authentic assessment than they were with traditional assessment. The current study findings agree with Ozan's study to the point that assessment, when considered relevant, makes students satisfied. However, the current study differed from the former on the basis that multiple methods of assessment are used in Ghana; hence, the study measured assessment relevance in that direction. Only authentic assessment was not considered as in the case of the former study.

Yalman, Basaran and Gonen (2016) was rather interested in the attitude satisfaction of students toward an online assessment. In line with the objective, the study discovered that learners had the perception that electronic mode of assessment is flexible, saves time, produces reliable scores and provides quick feedback on assessment. The study further showed that in all, learners were satisfied and intrinsically motivated for the online mode of testing. The current study finding confirms that of Yalman et al. study on the account that when students perceived the assessment practices of their school to be relevant, it positively affects their satisfaction. However, the difference is that as Yalman et al. study made explored online assessment mode, this present study investigated paper and pencil traditional form of assessment. Moreover, the former made use of distance students whereas the latter engaged regular undergraduate students.

Huang and Wang (2012) also explored the impact of English online practise exams on students' satisfaction in Taiwan. The study showed that electronic assessment was useful to them by aiding their inner willingness to learn because of the features of the electronic mode test. Furthermore, data showed that students were more satisfied with the online practise examination.

Like Yalman et al.'s (2016) study. Huang and Wang (2012) study findings reiterated that when students have the perception that their assessment is relevant, it increases their satisfaction level. It is worth stating that the aforementioned studies made use of online assessment. The emphasis is not on the assessment mode (i.e., whether paper and pencil test or online) per se, but on the perception of students regarding such assessment and how it affects their satisfaction.

Mediating Effect of Academic Hardiness on the Connection Between Service Students' Satisfaction and Service Quality

The objective was to examine the indirect effect of service quality on the students' satisfaction with educational services through academic hardiness. The results indicated that apart from the control sub-dimension of hardiness, commitment, and challenge fully mediated the relationship between service quality and the students' satisfaction with educational services. The result is not surprising because of the knowledge of having a sense of control, that is, being able to deal with situations to succeed. If one doesn't act on what he or she believes (commitment) in a creative and innovative way (challenge) that would be relevant in solving the problem at hand, knowledge of control over situations may not amount to anything. This is an indication that service quality affects the students' satisfaction partly through academic hardiness. This is to say that hardy students get satisfied easily when the service provided is of quality.

The picture being projected here is that not all hardiness dimensions act as potential indirect influencers of variables. For example, Yu and Liang (2021) investigated the mediating function of work-focused hardiness among cabin crews of some selected airlines. Findings revealed that cabin crews' work

commitment (i.e., hardiness dimension) mediated their affect for first aid and efficacy of administering first aid. Even though the current study aim was not the same as Yu and Liang's (2021) study, the results of both studies were similar in the sense that both studies found commitment, a dimension of hardiness, to be a significant mediator variable. The obvious difference between the two studies is that different exogenous and endogenous variables were used.

In a different empirical work, Lin, Tang, Shen, Liang, Tang, and Tsai (2020) also explored the mediating role of hardiness dimensions (i.e., individual challenge, control, and commitment) in the connection between technology-assisted teacher support perception and technology-embedded scientific inquiry (TESI). The results indicated a significant mediating effect of the hardiness construct for the connection between TESI and technology-assisted teacher support perception. The current study also found that the hardiness dimensions of commitment and challenge had a significant mediating effect on the service quality and students' satisfaction. This study's finding is similar to that of Lin et al.'s study except that both studies employed different exogenous and endogenous variables. Also, the two studies differed significantly in the population that was used. As Lin et al., study made use of basic school children in China, the current study made use of university students in Ghana.

In a typical senior high school context, Abdollahi, Panahipour, and Allen (2020) examined the mediating effect of academic hardiness and the relationship between sense of belongingness feelings for school and academic-related stress. The results revealed hardiness as an explanatory variable between academic-related stress and a sense of school belongingness. As in the case of other preceding studies, the behaviour of the hardiness construct is not different

from what happened in the current study. The only difference is that, aside from the context, the hardiness construct was introduced between the service quality and students' satisfaction among university undergraduate students. Therefore, the study's findings agree that the hardiness construct has a mediating effect among variables (i.e., either education-related or non-education-related).

Differences between Male and Female Students' Satisfaction of Educational Services

The difference between male and female satisfaction of educational satisfaction services was explored in this study. The results indicated that there was a statistically significant differences between male and female participants' satisfaction for educational services. In line with the finding, the female participants were found to be more satisfied than their counterpart males. The finding implies that on an average female students were more satisfied with the services of the university, that is, academic services, administrative services, security services and infrastructure than male students. Each gender group observes things differently. Females in general are noted to pay much attention to environmental and situational details (Karatepe, 2011); hence, they might have observed the drastic changes that have happened in the last three years on both campuses and taken keen interest in the progression of quality services within the universities. It is therefore not surprising that females are more satisfied than men.

The current study finding that participants differ significantly in their satisfaction with educational services based on gender is in agreement with previous studies. For instance, Akpoiroro and Okon (2015) investigated gender differences in the satisfaction of students in educational services in federal

universities in Nigeria, specifically in the South-South Geopolitical Zone. The results showed that male and female students differed significantly in their satisfaction with services. Moreover, Tessema, Ready, and Malone (2012) investigated the impact of gender on criterion variables, such as satisfaction of students, GPA, and ACT scores at Midwestern Public University. The results showed that students differed significantly on satisfaction with educational services. Furthermore, Tessema, Ready, and Yu (2012) explored the variables that affect student satisfaction. The results showed that respondents were found to differ significantly in their satisfaction based on gender. Males were noted to be more satisfied than their female counterparts. The previous studies produced similar results to the current study; however, in terms of context, the previous studies differed significantly from the current study's results. The previous studies were conducted in developed jurisdictions, while the current study was done in a developing economy, that is, Ghana. Yet, context can bring variation in how people perceive quality, yet the findings were similar.

Combine Effect of Assessment Relevance, Hardiness and Service Quality on Students' Satisfaction of Educational Services

The addictive impact of the exogenous variables (i.e., service quality, assessment relevance perception, and hardiness trait) was significant enough to tell which of the variables played a major predictive role in the model. After testing the hypothesis with a covariance-based structural equation modelling approach, the results revealed that the three exogenous variables jointly explained 35% of the total variance in satisfaction with educational services. Individually, service quality explains the variances in satisfaction by 26%, assessment relevance perception by 25%, and hardiness (all the three

dimensions) by 13%. Each of the three exogenous variables plays a major role in explaining satisfaction. However, the combined effect appears to be greater than the individual effects.

The implication of the current study finding is that for an individual student to have an increased satisfaction for educational services, first and foremost, the services provided by the academic institution must be of quality. Secondly, the assessment regime of the institution must be relevant to the learning needs of the students and finally, the students should have a hardy attitude toward academic work. As already said, even though the variables themselves have effect on the students' satisfaction, the presence of the three variables tend to have stronger impact on students' satisfaction of educational services. Based on the aforementioned results, the study can conclude that a majority of the University of Cape Coast and University of Education, Winneba, students were satisfied with educational services provided them because educational services provided them are of quality, assessment practices meet their learning needs and also a majority of them possess hardy attitude toward academic work.

The findings of this current study differed substantially from other empirical studies' suggestions of predictors of the students' satisfaction. For example, Stukalina (2014) explored the basic determinants of the students' satisfaction and motivation. In the same study, the author sought to test two models, that is, predictors of satisfaction and predictors of motivation. Concerning predictors of the students' satisfaction, which is in line with the objective of this work, Stukalina's study revealed that the instructional environment (i.e., teaching materials quality and availability, study course

content) and executive environment (i.e., quality of conducted lessons) were the basic predictors of the students' satisfaction of educational services. However, the current study found service quality, assessment relevance perception, and academic hardiness as the basic predictors of students' satisfaction.

Even though the basic predictors of satisfaction found by Stukalina's study are subsumed in the current study's service quality dimensions, the major difference in the findings of the two studies is largely attributable to context. As the former study was conducted in Riga, which is the capital of Latvia in Europe, the latter study was done in Cape Coast and Winneba, both in Ghana. These two nations have different economic situations and standards of education, and hence the expectations of their students might be different. Aside from the context differences, the former study used a single academic institution, Riga Technical University, whereas the latter study used two different universities in two different locations in Ghana, University of Cape Coast and University of Education, Winneba.The number of institutions used may also be a major differentiating factor for the findings of these two studies.

Lokman (2014) also investigated factors that explain the higher education students' satisfaction with educational services. The study reported that student-centered learning, good communication skills, and a supportive learning environment are the three main factors that affect the satisfaction of higher education students. The current study instead found service quality, assessment relevance perception, and academic hardiness as the predictors of higher education students' satisfaction. As in the case of the already discussed preceding study, Lokman's study findings are subsumed in the current study's service quality dimensions, except the context within which the studies

conducted were different. The former study was done in Albania, Europe, while the latter study was done in Ghana. Clearly, differences in the context may cause differences in student expectations, resulting in differences in the results of the two studies.Moreover, in the former study, only a single university in Tirana with a sample size of 500 was used, while in the latter study, two universities with a sample size of 1200 were used. This may also account for the disparities in the results of the studies.

Green, Hood, and Neumann's (2015) investigation of the determinants of the university undergraduate students' satisfaction further revealed teaching quality, services of the university, facilities, university image, and research activities as the main determinants or factors. Obviously, the study found that service quality, assessment relevance perception, and academic hardiness as the main determinants of the students' satisfaction contradicts the finding of the former study. The reasons for the differences in results may not be different from what has already been discussed in this section. It appears that previous study propositions of factors that affect the undergraduate students' satisfaction were largely centred on service quality variables with less regard to the innate traits of the students. The personality type (i.e., whether hardy or not) and the environment (with all its services and facilities) combine to define the stent to which a person would be satisfied with the services provided. These issues make the current study broader in scope in terms of defining the students' satisfaction model.

Chapter Summary

The study investigated factors that affect undergraduate students' satisfaction with educational services. The results revealed that the participants

were satisfied with the educational services of the University of Cape Coast and the University of Education, Winneba. It was also revealed that the participant had a high level of hardiness. Further, the participants perceived the assessment practises of the two universities to be educationally relevant. Regarding service quality, the study revealed that the participants perceived the services of the two universities to be good. In examining the impacts of the three predictor variables of the study, there was evidence to support that service quality, perception of assessment relevance, and academic hardiness individually and also jointly predicted the undergraduate students' satisfaction with educational services. Conclusively, the hypothesised (theoretical) model fits the study data. There was no discrepancy between the theoretical model and the predicted model; hence, the model was saturated.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The aim of the study was to investigate the impact of assessment relevance perception, service quality and academic hardiness on the satisfaction of undergraduate students of University of Cape Coast and University of Education, Winneba. This chapter presents the summary of the study, conclusions and recommendations.

Summary

Overview of the Study

The study explored the impact of assessment relevance perception, service quality, and academic hardiness on the satisfaction of undergraduate students at the University of Cape Coast and University of Education, Winneba. The investigation made use of descriptive survey design, that is, cross-sectional design to be specific. The study was founded on ten specific purposes that were translated into four research questions and six hypotheses. All undergraduate regular students served as the population of the study. However, regular undergraduate education students from the two universities, numbering 20,440, were targeted. By utilising a multi-stage sampling approach, the two universities were selected at the first stage with a purposive sampling method. At the second and third stages, education faculties and academic departments were selected using a simple random sampling method for each case. At the fourth stage, 1,022 students were selected using a proportionate stratified sampling method.

A questionnaire made up of scales from previous studies was adapted and used in this current investigation. These scales are as follows: Higher Education Service Quality Scale (HESQUAL), Perceived Assessment Relevance Scale (PAR), Academic Hardiness Scale (AHS), and Student Satisfaction Scale (SSS). After the adaptation process, the sales were validated using Confirmatory Factor Analysis with the assistance of Analysis of Moment Structures (AMOS) software. The accepted version (final) of the questionnaire recorded internal consistency indices as follows: Higher Education Service Quality Scale, α = .88, Perceived Assessment Relevance Scale, α=.89, Academic Hardiness Scale, α= .70 and Student Satisfaction Scale, α= .80 .

The research data to answer the research questions was analysed using statistics that summarise (descriptive), that is, percentages and frequencies, mean and standard deviations. Hypotheses were tested using covariance-based structural equation modelling (SEM) with AMOS bootstrap analysis.

Key Findings

The following findings came out of the study:

1. Participants had a high level of satisfaction with educational services.
2. Participants had high levels of academic hardiness, which means that a majority of the participants have the capacity to deal with academic stress much better.
3. Participants perceived the assessment practises of the two universities to be educationally relevant.
4. Participants perceived the educational services of the two universities to be of high quality.

5. Service quality was a significant positive predictor of the students' satisfaction with educational services. Service quality explains about 26% of the variance in students' satisfaction.
6. Academic hardiness dimensions, except for control, were significant positive predictors of the students' satisfaction with educational services. Academic hardiness dimensions jointly explained 13% of the variances in the students' satisfaction with educational services.
7. Assessment relevance perception was a significant positive predictor of student satisfaction with educational services. Assessment relevance accounted for 25% of the variance in the students' satisfaction.
8. Commitment and challenge dimensions of academic hardiness were seen as significant mediators of service quality and students' satisfaction with services.
9. There was a statistically significant difference between male and female participants in the satisfaction of educational services. Females were found to be more satisfied than males, even though the magnitude of the difference was not much.
10. Service quality, assessment relevance perception, and academic hardiness jointly predicted the students' satisfaction with educational services. The three exogenous variables jointly explained 35% of the total variance in the satisfaction of educational services. The hypothesised model perfectly fits the study data. There was no discrepancy between the hypothesised model and the tested or predicted model; hence, the model was saturated. Based on the findings, the final confirmed model is hereby presented in Figure 11.

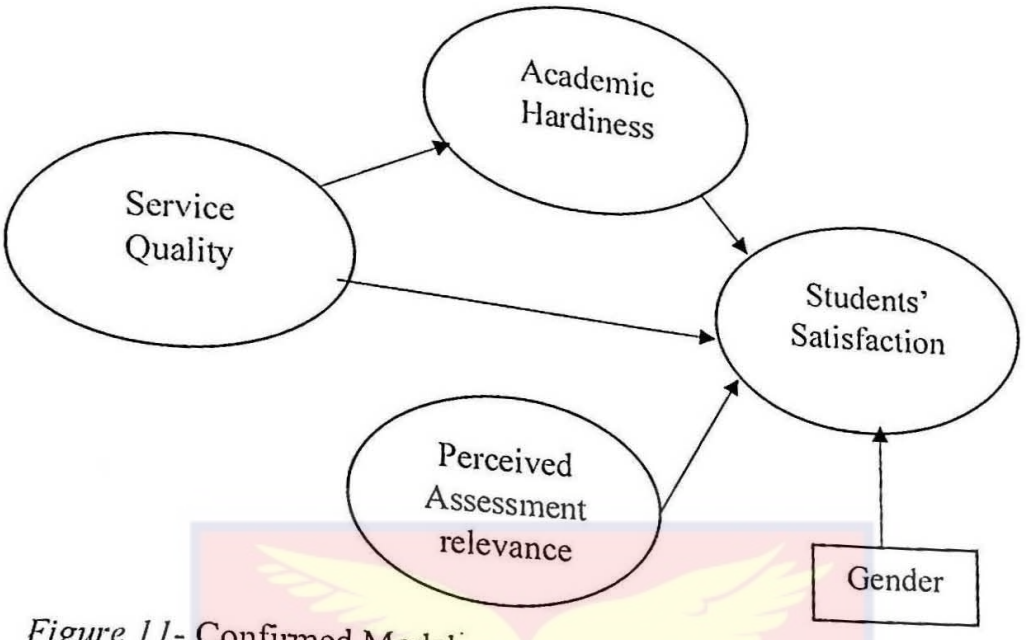

Figure 11- Confirmed Model

Conclusions

Inferring from the study findings, it is worth concluding that the rate at which students stay on a programme till completion time is likely to be better for the two universities that were used for the study (i.e., UCC and UEW). This is likely to happen because of the increased satisfaction level of the students regarding educational services. Again, it is worth concluding that students are able to deal with academic and school-related stress quite well because most of them are hardy.

The study can also conclude that assessment practises within UCC and UEW are likely to have a full effect on teaching and learning in terms of driving instruction and, more importantly, dictating the appropriate learning strategy (i.e., deep learning style) among learners.

Moreover, conclusions can be drawn concerning the fact that the students' enrolment as well as the institution's image within the local and international communities are likely to increase due to the perception that

educational services are of high quality within the two institutions (i.e., UCC and UEW).

Furthermore, the study can firmly conclude that students of UCC and UEW are satisfied with educational services not only because the school produces quality educational services but also because the assessment regime, which drives the whole teaching and learning encounter, is found to be educationally relevant to hardy students.

Finally, it is worth concluding that UCC and UEW are more likely to bridge the enrolment gender gap for education programmes. This is because female students were found to be more satisfied with educational services and, hence, they are more likely to encourage other females outside the university to pursue education programmes in the aforementioned institutions.

Recommendations

Based on the outcome of the study, the following recommendations are made for policy and practice:

1. The management of both the University of Cape Coast and the University of Education, Winneba, should strengthen the already existing capacity for academic counselling that aims at improving students' resilience toward academic tasks. This would help sustain the satisfaction level of students.
2. As a matter of necessity, the Directorate of Academic Planning and Quality Assurance (DAPQA) of the University of Cape Coast and the Directorate of Quality Assurance of the University of Education, Winneba, should as a matter of necessity, work hard through policy

implementation to maintain functional and transformational quality within the universities.

3. As a matter of policy, the management of the University of Cape Coast and the University of Education, Winneba, should engage all academic staff (especially teaching staff) through workshops on assessment modules to improve upon the existing assessment culture within the universities to maintain the relevance of assessment.
4. Academic institutions, especially the University of Cape Coast and the University of Education, Winneba, should implement their internal quality assurance evaluations based on the empirically confirmed framework of this study. Internal quality assurance evaluations should be tailored toward determining how well students are satisfied with the services of the university. This will help them to tackle rough areas of their services that need improvement.

Suggestions for Further Research

1. Future researchers are encouraged to further test the statistically confirmed model of this study in different academic institutions within Ghana and abroad to enhance the current study's generalizability.
2. It is further recommended that future researchers explore strategies for enhancing the students' academic hardiness since it was an area that the study could not cover.
3. Assessment models that work best for a variety of academic disciplines for the acquisition of relevant skills can also be explored by future researchers.

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APPENDICES

APPENDIX A

FINAL QUESTIONNAIRE

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

INSTRUCTION: This questionnaire is designed to gather data on assessment relevance, academic hardiness and service quality impact on students' satisfaction of educational services. The data so gathered will be used for research purposes only and will be treated with strict confidentiality. This is why your name is not required. Please supply information to every item on the questionnaire, as it is true of you.

Section A: Personal Data

In each of the items in 1 to 3 please tick (✓) the option that applies to you:

1. **Academic level:**

   Level 100 ( )

   Level 200 ( )

   Level 300 ( )

   Level 400 ( )

2. **Age-range:**

   Below 20 ( )

   20 – 25 ( )

   26 – 30 ( )

   above 30 ( )

3. **Gender:**

Male ( )

Female ( )

SECTION B: Service Quality

Please react to each of the following statements by ticking (✓) the column corresponding to the option that is truest of you using the following: **Very Good** (VG), **Good** (G), **Credit** (C), **Poor** (P), and **Very Poor** (VP).

S/N	STATEMENT	VG	G	C	P	VP
	Functional Service Quality					
4	Attitude and behaviour of administrative staffs.					
5	Administrative processes.					
6	Learning setting.					
7	General infrastructure.					
8	Attitude and behaviour of most lecturers.					
9	Course outline comprehensiveness (i.e. asid topics, date and e assessment modes ar specified).					
10	Instructional strategies.					
11	Competence of most lecturers.					
12	Support facilities (e.g. library, laboratories, IC labs etc.).					
	Transformative Service Quality					
13	My university has enabled me to be more self					

	confident.					
14	My university has helped me to think mor critically.					
15	My university has enabled me to have a highe level of self -awareness.					
16	My university has helped me to develop problem-solving skills with respect to my field of study.					
17	My university has allowed me to transcend m prejudices.					
18	My university has enabled me to increase my knowledge and skills in general.					

SECTION C: Perceived Assessment Relevance

Please react to each of the following statements by ticking (✓) the column corresponding to the option that is truest of you using the following: **Strongly Agree** (SA), **Agree** (A), **Disagree** (D), and **Strongly Disagree** (SD).

	STATEMENT	SA	A	D	SD
	Congruence with planned learning				
20	Assessment in courses in my department often assesses what I understand.				
21	Assignments given me are about what I have done in the lecture hall.				

22	How I am assessed is similar to what I do in the lecture hall.				
23	I am assessed on what my lecturer has taught me.				
	Authenticity				
24	I am often asked to apply what I learn to real life situations.				
25	My department courses assessment tasks are useful for everyday life.				
26	I find my department courses assessment tasks relevant to what is expected of me outside of school.				
27	My department courses assessment tasks measures my ability to apply what I know to solving real-life problems.				
28	My department courses assessment tasks examine my ability to answer everyday life questions.				
29	I boast of acquiring skills in my academic pursuit.				
	Student Consultation				
30	In my department I am clear about the types of assessment being used.				
31	I am aware how my assessments tasks are often being marked.				
32	My lecturers do explain to me and the rest of the class how each type of assessment is to be used.				
33	I do have a say in how I am assessed in my department.				

	Transparency				
34	I understand what is needed in all assessment tasks in my department.				
35	Myself and the rest of the class are always given prior notice before we are assessed.				
36	Myself and the rest of the class are always informed on the topics we will be assessed on.				
37	I am clear about what my lecturers want in my assessment tasks.				
38	At each point in time, I know how a particular assessment task(s) would be marked.				
	Students Capabilities				
39	I do complete the assessment tasks given me by the given time.				
40	I am always given an opportunity to suggest an assessment format that I should be assessed with.				
41	I am often given assessment tasks that suit my ability.				
42	When I am confused about an assessment task(s), I do get an explanation from my instructors how to go about it.				

SECTION D: Academic Hardiness

Please react to each of the following statements by ticking (✓) the column corresponding to the option that is truest of you using the following: **Strongly Agree** (SA), **Agree** (A), **Disagree** (D), and **Strongly Disagree** (SD).

	STATEMENT	SA	A	D	SD
	Commitment				
43	I take my academic work as a student seriously.				
44	I am dedicated to my education as a student.				
45	I work hard for grades.				
46	I am involved in all my class activities.				
47	Regardless of the class lesson, I do my best.				
48	I do make personal sacrifices to get good grades.				
49	I work hard as far as I have the desire to pass.				
51	Doing well academically is as important to me as to my parents.				
	Control				
53	Often times, if I perform poorly, I doubt my ability as a student.				
54	I often find it difficult to bounce back to normal from academic disappointment.				
55	I often becomes less motivated to study when I don't get the grades I want right away				
	Challenge				

56	I often avoid optional courses that require extra work from a student.				
58	I do not find it needful to a course if I am not confident I will do well in that course.				
59	I enroll in classes for courses in which I can do well.				

SECTION E: Students Satisfaction

Please respond to each of the following statements by ticking (✓) the column corresponding to the option that is truest of you using the following scale: **Strongly Agree** (SA), **Agree** (A), **Undecided** (U), **Disagree** (D) **and Strongly Disagree** (SD).

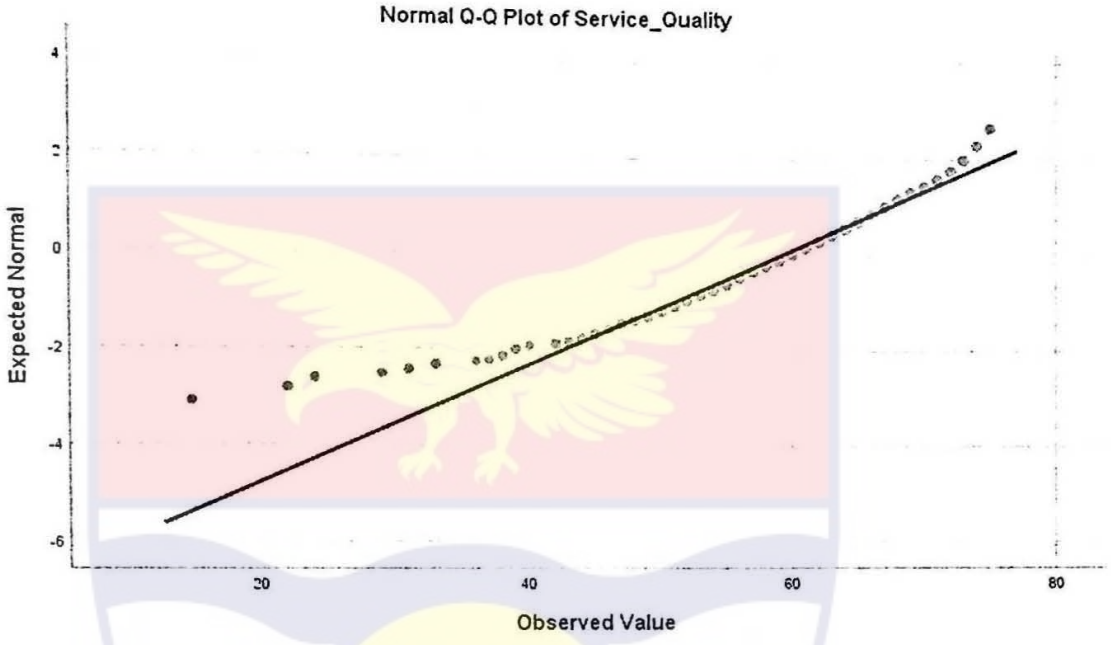
	STATEMENT	SA	A	U	D	SD
61	My choice to enrol at my university was a wise one.					
62	The educational services (e.g. library services, security services, accommodation services etc) of my university is exactly what is needed for higher education studies.					
63	I did the right thing by choosing my university because every academic activity in this institution is well structured.					

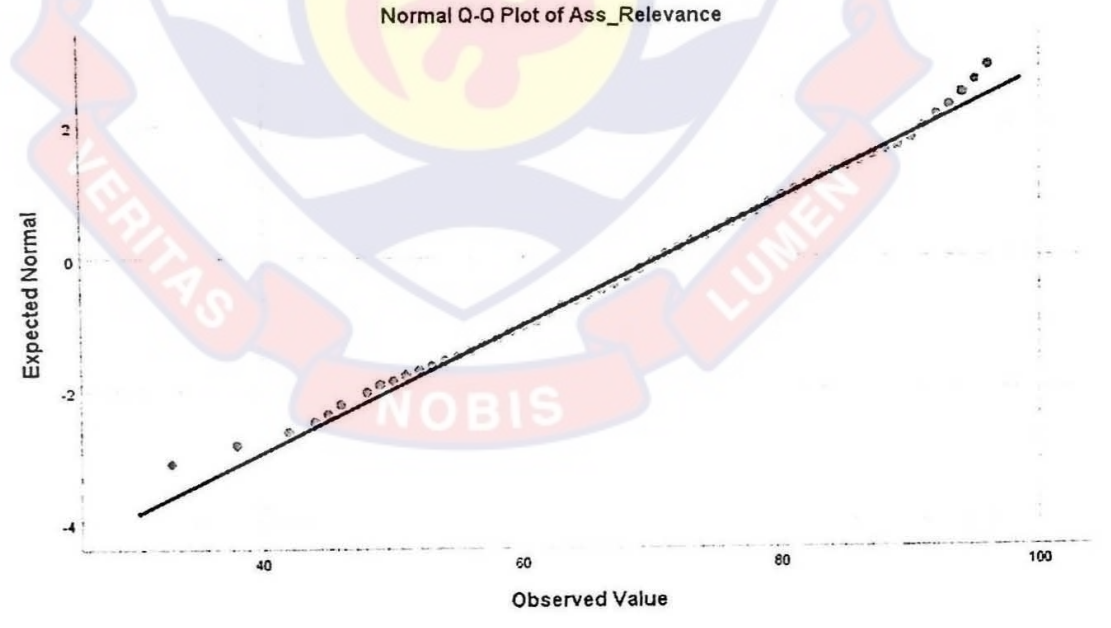
64	I am pleased to be enrolled as a student at my university because there are enough facilities that support students learning.					
65	I am enjoying studying at my university because both teaching and non-teaching staff are very supportive.					
66	I am happy with my experience as a student at my university because I see myself acquiring the needed skills for the world of work.					

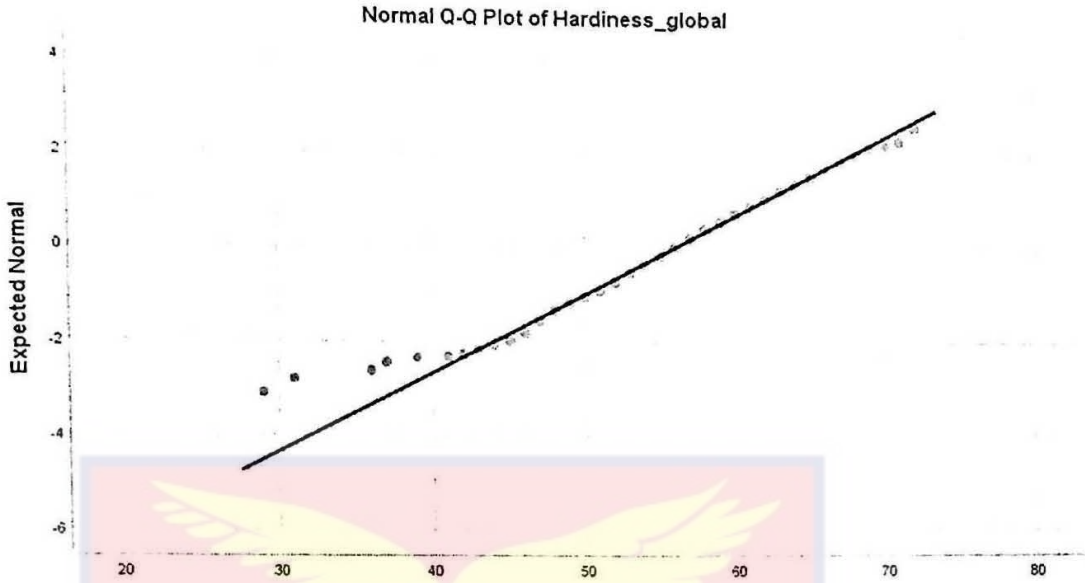
THANK YOU

APPENDIX B

NORMALITY ASSUMPTION TEST







APPENDIX C

INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS
DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Telephone: 0332091697
Email: dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

9th July, 2021

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION
MR. ISAAC AMOAKO

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

Mr. Amoako is researching on the topic:

"IMPACT OF ASSESSMENT RELEVANCE, SERVICE QUALITY AND ACADEMIC HARDINESS ON STUDENT SATISFACTION OF EDUCATIONAL SERVICES"

We would be most grateful if you could provide him the opportunity and assistance to take data for the study. Any information provided would be treated strictly as confidential.

We sincerely appreciate your co-operation and assistance in this direction.

Thank you.

Yours faithfully,

Ama A. Ocran (Ms.)
Principal Administrative Assistant
For: HEAD

APPENDIX D

ETHICAL CLEARANCE

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES-ERB/UCC-edu/vs/21-87 Date: 3rd November, 2021

Your Ref: .....

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer, Isaac Amoako, Reg. No EF/MEE/19/0005 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:

Impact of Assessment relevance, hardiness and service quality on students' satisfaction of educational services in some public universities in Ghana.

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)

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

Vice-Chairman, CES-ERB
Prof. K. Bajah
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