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UNIVERSITY OF CAPE COAST

AN INVESTIGATION INTO EXAMINATION MANAGEMENT

PRACTICES AT TAKORADI TECHNICAL UNIVERSITY (TTU)

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.

Candidate's Signature: ……………………… Date: ……………………

Name: ……………………………………………………………………

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were

supervised in accordance with the guidelines on the supervision of thesis laid

down by the University of Cape Coast.

Principal Supervisor's Signature: ………………… Date: ……………………

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Co-supervisor's Signature: …………………   Date: ……………………

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ABSTRACT

One of the major functions of a higher educational institution is the certification of its individual learners through examinations to find out if the concept of the knowledge and skills that have been imparted into them were understood (Idowu & Esere, 2009). With the purpose of investigating the current state of examination management practices at Takoradi Technical University, the study was conducted using the descriptive research design on all persons involved in the institutions examination process including the departmental administrators, heads of departments, lecturers, faculty officers and the student body. A sample of 370 respondents determined by the Bartlett, Kotrlik and Higgins (2001) table was selected through the quota and purposive sampling techniques. The study used two self-administered questionnaires for the staff and students to obtain data which were analysed using techniques such as means, percentages, frequencies and reliability analyses. It was found that the management activities of TTU before, during and after examinations are good and almost up to international standard. However, they encountered challenges such as inadequate infrastructure such as examination halls and desks for writing the examinations and some students not treated fairly by their lecturers during examinations. It was also found that these challenges could be improved if the examination unit is adequately resourced, its personnel are frequently trained, sufficient examination halls and desks are provided and examinations rules and regulations made known to all stakeholders. In view of these, the study recommended that the examination unit of TTU be adequately resourced and its staff be regularly trained on current issues of examination management.

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DEDICATION

To my family

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KEY WORDS

Education

Examinations

Examination Management

Invigilators

Students

Teachers

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CHAPTER ONE

INTRODUCTION

Background to the Study

Examination management is found to be global practice use in both educational context and pedagogical aspect of examining students, teachers and the process. Examination is one means of evaluating the knowledge and ability of an individual. Similarly, various methods have been employed in exploring the ability of individuals starting from manual means of using paper, pencil, to electronic, from oral to written and theoretical to practical. Management of examinations, both public and private industries, examine new job seekers through aptitude test. The higher educational institutions such as universities and colleges all over the world register and conduct examinations for their students.

Education is a fulcrum on which all other developmental facets are hinged (Denga & Denga, 1998). Broadly speaking, education is an ongoing process that facilitates the process of learning and acquisition of theoretical and practical skills that equip mankind to utilise the environment effectively for personal and national development. Proper education has to do with the balanced development of the three domains: cognitive (intellectual), affective (emotional/feeling, ethical, moral) and psychomotor.

The United Nations through its arm, the United Nations Education, Scientific and Cultural Organization (UNESCO) recognizes the right to education as one of the main principles underlining the sustainable development of its member nations and as such has adopted a right-based policy – the Education 2030 Agenda and Sustainability Goal 4 (SDG4) – that seeks to ensure

that education is fully enjoyed as a fundamental human right to sustainable development (UNESCO, 2017).It is worth mentioning that, through education professionals are churned out for the various sectors of our national development. Children from poor backgrounds in the society are able to change the economic fortunes of their families by becoming gainfully employed in career fields such as entrepreneurs, medical doctors, architects, engineers, lecturers, lawyers, and so on who have some form of high standings on the economic and social ladder of most societies. Through their various activities, these professionals, along with others, in turn contribute enormously to the overall development of every country.

The tertiary education being the last form of formal education has been the focus of many governments as well as societies due to its cardinal objective of furnishing its students with the requisite knowledge and skills with the quest for guiding them to be responsible and effective leaders and better contributors to our societies and the national development efforts (Adomako, 2005). Also, Idowu and Esere (2009) indicate that one of the major functions of a higher educational institution is the certification of the individual learners studying under its umbrella. However, there is the need to assess the students to find out if the concept of the knowledge and skills that have been imparted into the students were grasped and understood, hence, the introduction of examinations, tests or assessments. In view of this, Zhang, Liu and Zang (2014) opine that a complete education involves teaching as the foundation; learning as the guarantee; and testing as the intermediary, which are very indispensable and linked to one another.

Adekale (1993) looks at education as an instrument for evaluating the skills and knowledge of individuals in general and on specific areas of studies, and overall academic achievements. Fasasi (2006) sees education as a decision-making tool and so explained it as an instrument for decision-making on the performance and consequently the job opportunity and educational advancement for an individual. This, as Onyechere (1997) indicates, can be conducted through means such as oral, written or practical exercises. In view of these, it is evident that examination or testing plays a very important role in every form and level of education as it helps in deciding one's advancement in an area of study. However, to effectively carry out this role of certification, some form of assessment or testing of one kind or the other is necessary. In another dimension, Oguneye (2002) asserted that examination involves the deliberate effort of the teacher or lecturer to measure the effect of the instructional process as well as the overall effect of school learning on the behaviour of students. Thus, it measures the outcome of learning through obtaining information about the knowledge gains, behavioural changes and other aspects of a learners' development and helps teachers to improve the teaching profession.

Examination as a form of testing is employed to assess students at all levels of education worldwide (Niu, 2000; Zhao, 2010; Han, 2011; Li &Shu, 2011). Conducting examination involves more than just taking the examination on a particular stipulated date. The unhealthy rivalry of students to outperform their competitors, unprofessional attitudes of some lecturers toward examinations and some examination officers among other reasons tend to compromise the quality of carrying out successful examinations and this has

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called for appropriate procedures to guide the conduct of examination to ensure its sanity (Ogunji, 2011). In view of this, it is very essential for the entire examination process to be managed well so as to prevent the occurrence of compromising on the quality of examination conducted in tertiary educational institutions.

The conduct of examination is a management process which involves the act of planning, organising, leading and controlling using all the available resources at one's disposal to achieve the set goals of such an organisation. For an educational institution to effectively manage its examination conduct, factors such as shared vision, leadership, optimal use of time (both learning and teaching), conducive working environment, positive reinforcement with clear and fair discipline need to be adhered to. Other factors, such as supervision, the performance of students, raising students' self-esteem, positions of responsibility, are issues that affect the conduct of examination (Ogunji, 2011). From these factors, it can be realised that the conduct of examination focuses on the entire vision and mission statements of that academic institution.

Ogunji (2011) further observes that examination management is considered as the process or the act of planning, organising and administering examination which involves teaching in the classroom, setting of examination questions, administering the examination, marking or grading and issuance of a certificate. Examination management is a complex system due to its purpose of strengthening the procedures of producing papers, printing, confidentiality, and security management, marking exam papers, scoring, and analysing the examination papers with a common goal of creating a system that has students' development as the overall focus (Zhang et al., 2014). Thus, managing

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examination involves the contributions of lecturers, examination administrators and parents as well as students.

Studies have shown that many individuals resort to using unfair means in examinations and so the focus has globally been shifted onto employing a digital or electronic system to manage all examinations-related activities (Ugwu, 2008; Wilayat, 2009; UK Essays, 2013; Xu, Guo & Zhou, 2013). This is as a result of compromising the ethical standards for conducting successful examinations (Liman, 1996). In view of this, the importance of properly managing examinations cannot be downplayed in every educational system.

Examination is one of the major means of assessing and evaluating students or learners' skills, knowledge and attitude in their areas of studies. It is a mode of assessing students' acquisition of certain required quantum of knowledge and involves a lot of behind-the-scene preparations (i.e. management before, during and after taking the examinations). As such, Zhang et al. (2014) posit that examination management is the set of activities undertaken to strengthen the procedures employed in producing examination papers, printing, confidentiality, and security management, marking exam papers, scoring, and analysing the examination papers to ensure that the examination process is devoid of any form of mismanagement. Thus, the success or otherwise of any examination process depends on its management practices. Moreover, Adomako (2005) states that examination irregularities decrease the quality of the examination systems employed by the tertiary institutions in Ghana and supports the concerns that the kind of graduates being produced by these institutions were of substandard quality. As such, Racca and Lasaten (2016) intimate that school administrators and officials should realize

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that improving educational standards is not only about effective administrative management, construction of school buildings, and availability of lecturers and books but quality classroom practices of which classroom assessment plays a very crucial role. The inability of management of tertiary educational institutions to properly manage the entire examination process would likely compromise the quality of its conduct. Institutions that are charged with the conduct of examinations are to ensure that the system of managing examinations is not compromised.

Statement of the Problem

Examination irregularities which may stem from wrongful management of examinations have become an issue of concern and have attracted the attention of researchers as several studies have been conducted on them to curb their devastating effects on learners (Adomako, 2005; Achio et al., 2012; Folson & Awuah, 2014; Frempong et al., 2016). Studies have been conducted at the expense of taking a critical look at the overall examination management systems at the various institutions which are the premises on which to ensure smooth conduct of examinations (Zhang et al., 2014; Ugwu, 2008; Wilayat, 2009; UK Essays, 2013; Xu et al., 2013). Unfortunately, there appears to be little concern and evaluation of the existing examination management practices before, during and after in higher educational institutions in Ghana.

The Takoradi Technical University policy on managing examinations and the process of managing examinations include: setting, moderating (HND), printing and storing of examination questions; appointing invigilators, supervisors and coordinators; selecting examination centres; making the required seating arrangements; ensuring that examination rules and regulations

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are made available to all stakeholders before the examinations (Takoradi Technical University, 2016). The policy further indicates that stakeholders (students, lecturers, examination officers, examination coordinators, invigilators and security officers) in managing examinations at the institution have to ensure that rules and regulations on how to conduct oneself during the examinations are adhered to; and also make available to stakeholders the constituents of examination irregularities, malpractices and their associated sanctions as well as procedures for making appeals after the examinations. It implies that quite a lot of preparations are made to successfully conduct examinations in Takoradi Technical University.

The major focus in conducting any sort of examination is on the question items (Vasupongayya, Noodam & Kongyong, 2013). However, a lot of tasks (such as time tabling, guiding the time and place for the course/subject to be taken, assigning each course to a room, assigning a set of invigilators to each examination room, and assigning a seating layout for each examination room) as well as all other activities which occur during and after the examination, are required in order to organise a successful examination.

It has been observed that a lot of studies regarding examinations have focused on students' output and the malpractices involved in examinations than the overall system of examination management as a whole (Adomako, 2005; Achio, Ameko, Kutsanedzie, Alhassan & Ganaa, 2012; Folson & Awuah, 2014; Frempong, Arloo & Amissah, 2016). The Ghana News Agency (2013) reported that the Takoradi Technical University was awarded by the Oxford Summit in the United Kingdom in the year 2013. The awards include best Regional University in Africa, European Society for Quality Research Award and Best

Practices in Examination Award. In spite of this great feat chalked by the university as regards the conduct of examinations, the anecdotal report suggests otherwise. In view of these rather contradictory perspectives, this study sought to investigate the practices associated with the management of examinations in Takoradi Technical University.

Purpose of the Study

The purpose of the study was to investigate the current state of practices in managing examinations at the Takoradi Technical University, considering the practices before, during and after.

Research objectives

1. To assess the current state of examination management in the Takoradi Technical University.

2. To find out the challenges that Takoradi Technical University encounter in managing examinations.

3. To identify the means in which the examinations management challenges of Takoradi Technical University can be solved.

Research Questions

The study sought to answer the following research questions:

4. What is the current state of examination management in the Takoradi Technical University?

5. What are the challenges that Takoradi Technical University encounter in managing examinations?

6. How can the examinations management challenges of Takoradi Technical University be solved?

Significance of the Study

This study sought to investigate the current practices used in managing examinations in Takoradi Technical University. It focuses on the practices before, during and after examinations. The outcome of this study would be significant to examination officers of TTU and other higher education institutions with regard to the pre, during and the post preparation of examinations. On the part of lecturers, the study would be beneficial to them in the domain of setting questions for examinations and abiding by the rules and regulations that undergird their professional mandate in this regard.

Invigilators of examinations of higher educational institutions would ensure that examinations are conducted according to the current instructions for conducting examinations and upholding the integrity of examination and assessment process. This current study would also present a blueprint or guidelines for students to comport themselves during examinations in order not to get themselves into any examination-related offences.

The study would enable management of the Takoradi Technical University to have a deeper understanding of examination management practices and its associated challenges as well as ways of minimising these challenges. This would go a long way to help the management to improve the validity, credibility and reliability of their examinations which in turn increases the overall confidence of employers in employing graduates who hold certificates from this institution.

The Ministry of Education, as the overseer of all educational matters in the country, would also benefit immensely from this study. The outcome of the study would enable the ministry to be abreast with the current state of examination management practices and their associated challenges in the

Ghanaian public universities. Thus, enable other higher educational institutions to formulate appropriate policies to enhance the smooth and successful management of examinations in the country from the findings, conclusions and recommendations that would be made from this current study.

Furthermore, through the outcome of the study, administrators in charge of managing examinations at the public universities in Ghana would be enlightened on the sources of numerous irregularities that affect the successful conduct of their examinations. Through this, the administrators would be able to institute appropriate measures to eliminate such detestable practices.

Finally, the results of the study would add to the body of knowledge and literature on managing examinations and their associated challenges. As such, the study would serve as a basis for further research to students as well as other researchers in the field of examination management.

Delimitation of the Study

The study was conducted on Takoradi Technical University. In terms of its geographical characteristics, the study was conducted within the confines of the campuses of Takoradi Technical University at Effia-Kuma New Site (Faculties of Engineering, Applied Science and Applied Arts) and Butumagyebu (Faculty of Business). Thus, the study solicited the views of respondents working or schooling at the institution.

Though there are many kinds of test or assessment such as quizzes, assignments, mid-semester and end-of-semester examinations that are undertaken by students of Takoradi Technical University, the study focused on the examination processes involved in conducting the mid-semester and the end-of-semester examinations. The focus of the study was placed on these forms

of examinations because they are the ones that need major careful administrative preparations from the entire institution in order to conduct them successfully. Conducting successful quizzes and class assignments, on the other hand, are not so much entailing and as such, mostly only requires the efforts of the lecturers, instructors or teaching assistants.

Furthermore, the respondents for the study included all the administrators at the Examinations Unit of the technical university as well as the various faculties. This was because the administrators (who include examination unit officers, faculty officers, heads of departments and examination coordinators) are directly involved in the management or administration of examinations at the institutional and faculty levels. Additionally, some of the lecturers, security officers and the students were selected to be part of the study's respondents.

Finally, the study solicited the views of the respondents on issues such as the current state of examination management in the Takoradi Technical University, the challenges being encountered by the university in managing examinations and measures that can be put in place by the authorities to improve examination management within the university.

Limitations of the Study

First and foremost, as with every research survey, the study encountered some challenges in its successful conduct. The study was conducted in Takoradi Technical University. In view of this, the findings of the study cannot be generalized to even the universities within the region.

Secondly, the study encountered some difficulty in getting adequate information on managing examinations at the higher level of education. This is

because it appears very little studies had been conducted on the topic. However, this limitation did not affect the validity of the data as the researcher dealt with the data that were made available to her for study and analysed these limited data as were given to the researcher.

Definition of Terms

The key terms as used in the study are defined as follows:

Examination: It is an organised assessment of an individual's performance, on the basis of his or her institutional procedural exposure.

Examination management: This involves all the activities and practices that are put in place before, during and after the day of the examination to ensure that there is successful organisation of examination.

Examination malpractices: This involves all the practices that interfere with the successful running of examination. The activities cover those before, during and after the day of examination.

Organisation of the Study

The study is made up of five chapters. The first chapter deals with the background of the study, statement of the problem, purpose of the study, research questions, the significance of the study, delimitation of the study, limitations of the study, definition of terms and organisation of the study.

Chapter Two deals with the reviewing of related literature of other authors on the above subject. The third chapter focuses on the research methods of the study. It involves the research design, study area, population, sampling procedures, instrument, data collection procedures and the data processing and analysis.

The fourth chapter covers the analysis, interpretation, the discussion and presentation of the results whilst the fifth and final chapter is composed of the summary, conclusions and recommendations of the study as well as areas for further research.

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CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter presents the literature review with respect to the study. It examines the current state of practices in managing examinations at the Takoradi Technical University. According to Akyeampong,Djangmah, Oduro, Seidu, and Hunt (2007), the objective of the review of the related literature is to provide a conceptual/theoretical framework on a basis from which the researcher could draw conclusions or make generalization during the analysis of the data. In view of the purpose of the study, this chapter deals with reviewing the works of other authors on the subject of examination management in tertiary educational institutions. The review of empirical studies is done according to the research questions of the study. The review is organised under the following headings:

1. Concept of Examinations

2. Concept of Examination Management

3. Historical Perspective of Examinations

4. The Practice of Examination from the Perspectives of Some Countries

5. Importance of Examinations

6. Management Theories and Examination Management

7. Examination Management Practices

8. Ethics of Examination Management

9. Challenges of Examination Management

10. Mitigating Challenges of Examination Management

11. Conceptual Framework of the Study

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12. Chapter Summary

Concept of Examinations

The Collins English Dictionary defines examination as a formal test that one takes to show his or her knowledge or ability in a particular subject in order to obtain a qualification. Adeyemi and Akindele (2002) see examination as a continual process and, thus, opine that examination is the process which comes after a period of learning. Wilayat (2009) considers examination as the measurement of knowledge or skills gained either orally or in written form and, based on the outcome, judge the adequacy of the properties possessed by the candidates. Adeyemi and Akindele (2002) further argue that examination is an organised assessment of an individual's performance, on the basis of his or her institutional procedural exposure. Additionally, Nsude (1998) claims that examinations are tools for evaluating the progress made by an individual, in the course of acquiring skills or knowledge over a period. In this regard, examination has been seen as one of the major means of assessing, evaluating or measuring candidates' skills, knowledge, aptitude, physical fitness, or classification and attitude in both general and specific areas of studies (Adow, Alio & Thinguri, 2015).

The nature of examinations or tests varies in style, rigor and requirements and they may be administered verbally, on paper, on a computer, or in a predetermined area that demands candidates to demonstrate or perform a set of skills (Ammani, 2011). For instance, candidates in a closed book test are usually required to rely on their memory to respond to specific items or

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questions whilst in an open book test, they may be allowed to use a reference book.

According to Osuji and Okonkwo (2006), examinations can basically be conducted for placement, formative, diagnostic and summative purposes through either a formal or informal form of administration. For instance, parents or guardians may informally test their children or wards in reading tests whereas a lecturer may formally test candidates in a final examination in an examination room. Examinations can be conducted by assessing candidates on the content of a subject they have learnt over a given period of time by either their teacher or an examining body and they can come in a one time or a continuous assessment form (Ammani, 2011; Wilayat, 2009). Thus, in most of the universities, examinations are usually conducted internally by an examining body within the institution.

Examinations help to establish how much students have learned or the level at which they are. Again, through examinations, a plan can be made to modify what needs to be taught in order to make up for the weaknesses of students. In the view of Wilayat (2009), examination is the pivotal point around which the whole system of education revolves and the success or failure of the system of examination is an indicator of the success or failure of that particular system of education. Basically, according to Wilayat every examination should be valid in performing the functions for which it was designed; reliable by providing consistent measurement irrespective of the examiner; and be able to assess the performance or judge the academic attainment of students. In view of this, when the prevailing system of examination and its mode of conduct consist of anything different from these basic characteristics, then there is an indication

that the system has degenerated to an extent that its validity and reliability are questionable.

The concept of examinations dates back to the ancient times. A historical background of examinations, as highlighted in the next section, provides a better insight into the concept of examinations.

Historical Perspective of Examinations

All over the world, both written and oral examinations have become principal aspects of schools, universities, workplaces and societies, and it is, however, sometimes forgotten that they were not originally part of the western system of education. Examinations are said to have originated from China. According to Usher (2016), the many traditions of the western world originally avoided every form of examination as their universities at that time offered their students places based on recommendations from the nobles or people of higher social standings within the community in which they operated. As such, a person could be invited for an interview to enable him or her obtain the right to be awarded a degree if only he or she could impress his or her lecturers continually for a few years. For example, during the medieval times up till the 17[th]century, universities provided people the opportunity to obtain degrees based on their capability to successfully give lectures or credibly argue a particular stance in a debate as was known in Latin as the *disputatio* (Usher, 2016).

It is recorded in early histories of education that testing or examination and measurement conducted were informal written and oral enquiries, as Socrates conducted several informal oral examinations in the 5th Century B.C. (Osuji & Okonkwo, 2006). Again, in this respect, Uche (2005) recounted that

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the first-ever standardized test or examination witnessed in the world occurred in China under the Han Dynasty. These tests or examinations were informal competitive examinations that covered the six (6) areas of Arts consisting of writing, music, arithmetic, archery, horsemanship and knowledge of the rituals and ceremonies of both public and private parts were employed by the imperial authorities of China around 2200 B.C. to recruit people into the civil service (i.e. the administrative system of the traditional Chinese government).

Through the use of examinations as tools for recruiting qualified personnel into the civil service, the Chinese civil service system became stronger and, thereby, stabilized the Chinese empire for over two thousand 2,000 years as well as became one of the major outlets that propelled social movement in Chinese societies (Pletcher, 2008). In view of the benefits that examinations afforded China, examinations eventually became a model for the civil service systems which later emerged and developed in other Asian and Western countries.

Concept of Examination Management

The objective of examination is to find out the extent to which students understand what they have been taught and thereby grade the students in order of merit or competence (Asore, 2014). As such, no student is to get preferential treatment or undue advantage over others. A report by Mindlogicx.com showed that on an average, two out of 10 universities face the serious threat of either question paper leakage which can result in the cancelation of the scheduled examinations or face the embarrassment of seeing their certificates regarded as unauthentic. To ensure that examinations are fairly managed without irregularities viable management strategies are put in place. Thus, Adeyemi and

Akindele (2002) define examination management as the all in-one process for ensuring a smooth conduct of examinations in schools which helps to optimise students' experience by reducing the operational risks which exam produce, and save time and money in the process. Elaborately, Irira (2014) remarked that every effective examination management involves the act of planning, organizing and administering examinations.

In the universities, managing examinations is the responsibility of the Academic Registry (in UK and Ghanaian Universities) or the Student Office (in several US Universities) (Babatola, n.d.). However, the examination management process begins with classroom teaching of students, setting of examination questions, administration of examinations, marking and grading, and ends with the issuance of certificate of achievement (Irira, 2014). Thus, universities face the problem of providing authentic certificates by ensuring that examinations are conducted smoothly. Irira further added that managing examinations effectively involves organizing and directing all the human and material resources required to conduct smooth examinations to ensure that there are no malpractices associated with the examination process.

Similarly, Zhang et al. (2014) opined that a key concern in examination management is to strengthen the procedure involved in the production of examination papers, printing, confidentiality and security management, testing organization, marking examination papers, reading scores, analysing examination paper, binding and archiving. Zhang et al. argued further that specifically, examination management system should ensure that:

1. The proposed examination paper should be constructed scientifically according to the different teaching content.

2. Organization of the examination should be done in view of any examination reform specific to the kind of institution and their regulations regarding examinations.

In view of this, the success in managing examinations is dependent on school authorities establishing protocols and working closely with the lecturers, administrators, staff at the examinations unit, examination officers or administrators at the various academic departments, invigilators, security officials, students and even parents. Thus a successful examination management is based on the collaborative effort of all the individuals involved. This places a lot of burden on the examination officers who are the pivots of the examination management processes. Hence, the quality of effective examinations management dictates the level of success in a particular examination (Irira, 2014).

According to Rukundo and Magambo (2011), if an examination is carefully administered, the students' performances in the same examination should be similar and on other occasions similar results should be obtained by groups of comparable candidates, even when the examination is marked by a different examiner. This indicates that the validity and reliability of the examination is ensured based on the quality of management and administration practices (Walklin, 1990). In view of this, Gronlund and Linn (1990) suggest that examinations can successfully be administered by any conscientious teacher or test administrator, as long as the prescribed testing procedures such as motivating pupils to do their best; directions for examination administration; accurately keeping time; recording significant events capable of influencing test scores; and promptly collecting examination materials are rigorously followed.

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The Practice of Examination from the Perspectives of Some Countries

Since its inception in ancient China, standardized tests or examinations have evolved so much through its adoption by several developed countries such as the United States of America (USA), United Kingdom (UK), France, and so on. With the adoption of examinations coupled with technological advancement, examination authorities of adopting countries modified and are still modifying the mode in which examinations are conducted within their jurisdiction (Care & Vista, 2017). The developed countries have different ways of conducting their standardized examinations from the developing countries as a result of the contrasting cultures. However, since standardized tests were essentially introduced into the educational systems of the developing countries by the developed countries, there is bound to be some similarities. Thus, this section compares the examination management practices of any of the developed countries to that of a developing country, especially an African country. The following sub-sections are devoted to the before, during and after examinations.

Preparations before examination session

Before the actual day for the examinations, the International Test Commission, ITC, (2001) stipulates that the authorities, first and foremost, have to explicitly obtain the candidates or their legal guardians or representatives' consent before the examination. On this, examination management in developing countries seem to ignore the essence of soliciting the candidates' concerns as none of the available literature from African origin mentioned such issue but rather go straight to the submission of courses to be examined by the head of the training department to the Examinations Office (Irira, 2014). Again,

the authorities have to provide all stakeholders in time with clear information on the examination's purpose, best ways to prepare for the examination session, and the procedures to be followed and as well advise candidates of the language considered appropriate during the test.

The Commission also stated that test administration authorities have to send candidates approved practice, sample, or preparation materials which will be required in writing the test, if available, and clearly explain to them their rights and responsibilities, when the examination is optional as well as the consequences of taking or not taking the test to enable them make an informed choice (ITC, 2001). On these, it was observed that, in Africa, the concern of examination authorities is on candidates having access to materials only as Irira (2014) stated that candidates are expected to have been in custody of the study materials to be examined for a minimum of eight weeks.

Furthermore, ITC (2001) stipulated that examination authorities should make the necessary practical arrangements to ensure that: examinations locations and facilities are accessible, quiet, safe, distraction-free and well-arranged in advance as appropriate for the intended purpose; examination materials are sufficient and question or answer booklets scrutinized for marks left on them by previous users. This is similar to that of Tanzania's examination practices of moderating question papers and marking schemes both internally and externally to check each item for accuracy, consistency and coverage of course content (Irira, 2014).

In many African countries, such as Tanzania, Irira (2014) posited that at the end of moderating the question papers as well as the marking schemes, examination administrators compile the relevant items, obtain eligibility report

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and then start the printing and packaging of the question papers. On the other, regarding the practices in the developed countries, the ITC (2001) added that in making the necessary arrangements, the examination authorities should ensure that only competent staff are involved in the examination process; and appropriately consider the disabled as well as anticipate likely challenges and provide possible solutions to them before examinations.

Practices during examinations

The ITC (2001) stipulated that during examinations, before candidates are instructed to begin the examination, administrators should act positively by welcoming and briefing candidates to reduce their anxiety. Similarly, Irira (2014) stated that in Africa, specifically Tanzania, before candidates are allowed to take an examination they must have registered for the courses to be examined in so that their identities could be established as they enter examination halls using appropriate entry requirements. Examination administrators also have to ensure that the tests are administered under the appropriate supervised conditions by ensuring that candidates possess the materials needed for the test and eliminating every potential source of distraction such as wristwatch alarms, mobile phones, pagers, etc. before examinations begin.

Interestingly, the ITC (2001) stated that if possible, test instructions should be administered in the primary language of candidates, though the content of test may be designed to give evidence of knowledge or skills in a non-primary language. The Commission stated that it is the responsibility of the examination administrators to clearly and calmly read and strictly adhere to the

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instructions specified in the manual for conducting the test and as well make reasonable provisions for disabled persons.

Furthermore, examination administrators are required to give candidates adequate time to complete their examinations as well as monitor and accurately record deviations from test procedures and response times where appropriate. They also ensure that those assisting in administering the examinations have had proper training. Finally, the ITC postulated that examination administrators should ensure candidates are not subjected to distractions during an examination session or left unattended as well as ensure all used materials are accounted for at the end of each examination session.

Practices after examinations

The ITC (2001) stated that after examinations have been written, lecturers and other scorers should carefully follow the standard scoring procedures and appropriately choose scale types and convert raw scores to other relevant types of scale based on the intended use of the test scores. To ensure accurate results are put out for consumption, test scorers also have the responsibility to check score scale-conversions and other clerical procedures for accuracy. These indicate that in the developed countries the concentration is on the accuracy and quality of the results. However, in the developing countries the concern lies mostly on who is responsible for marking the answered scripts as Irira (2014) stated that answered scripts are marked by facilitators of the respective courses and are marked according to the specification of marking guide.

Furthermore, the ITC (2001) indicated that test scorers should, where appropriate, compute composite scores using standard formulae and equations

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as well as employ procedures to screen test results to identify unreasonable scores. Likewise, in Tanzania, the standardization of the results are carried out at this stage as Irira (2014) stated that after the examinations activities such as standardization process, familiarization of examiners with the marking guide, marking of answered scripts and award procedures are carried out.

Finally, in the developed world, the quality of the scores are looked at before and during the marking exercises as those responsible for scoring candidates are admonished to clearly and accurately label scales in reports, and provide clear identification of norms, scales types, and equations used (ITC, 2001).

However, in the developing world, the quality assurance process is done as another stage in the examination process as Irira (2014) stated that the marked scripts are sent to external examiners by the examination office to assess the performance of script markers. Subsequently, the examination results are published on the internet and notice boards for the public's consumption after due approval of the report on the examination from the school authorities (Irira). However, in the developed countries, the consent of the candidates is also solicited before the results of the examinations are produced as the ITC (2001) stated that informed consent of the candidates, or their legal representatives, are solicited before authorities produce any written or oral reports for relevant interested parties.

Importance of Examinations

There are several reasons for which standardized examinations are considered very essential aspects of the education process. In view of this, Phelps (2008) indicated that though standardized examinations or tests are

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imperfect as tools for evaluation, they provide decision-makers useful information that no other evaluation method can. As such, Nweze (2009) added that governments and other policy makers can use the results of examinations to gain an understanding into the challenges affecting the education sector for improved policy formulation.

Popham (2016) opined that standardized tests are conducted to make fair comparisons among students or candidates. Since the content of the test or examination is the same for every partaker and one is expected to have completed the requisite training or learning before taking it, it enables for a fair judgement and comparison of the intellectual capabilities of the students or candidates.

Similarly, Claiborn (2009) opined that standardized testing is a common means of determining a student's past academic achievement as well as his or her future potential. Claiborn, further adds that a standardized examination is considered as a very essential aspect of every educational system due to the fact that examinations or tests aid in assessing what is being taught on a large scale across a certain geographical area. In view of this, they are used to measure how educational standards are being met by schools and universities.

Nweze (2009) sees examination as an evaluation mechanism of both students and lecturers. This is owing to the fact that academic examination infuses the spirit of hard work as well as the zeal to study into students; helps to identify students with special needs and skills for the requisite attentions; and can, in some occasions, provide a guide in choosing future careers (Nwana, 1981).

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The importance of educational testing for school administrators, particularly lecturers, as Nweze (2009) and Nwana (1981) opined, gives them the opportunity to ascertain the extent of achievement of the set objectives. This is to say that examinations give lecturers the chance to know whether or not their intended impartation of knowledge to students has been done successfully. Through examinations discoveries of the learning and other related difficulties encountered by students are made.

Nwana (1981) posited that examinations enable stakeholders to determine the strength and weakness of the teaching methods. By assessing the teaching methods, lecturers as well as authorities are able to ascertain how suitable the methods are for their students. In the same vein, Popham (2016) posited that examinations can be used to improve the on-going instruction and learning process by evaluating the mode of instruction being used. Thus, examinations tend to serve as central points for modifying, if the need be, an aspect or the entire teaching system (Nweze, 2009).

Finally, Nwana (1981) shared that examinations function in education by motivating students to put in their best; identifying how well students have learnt and determining how adequate or otherwise the resources for teaching and learning are.

Management Theories and Examination Management

In management, there are theories or schools of thought on how activities within organisations are or should be carried out. These schools of thought, commonly known as management theories include the systems, scientific, bureaucratic, administrative, human relations and the X and Y theories. However, since the subject under discussion is on examinations

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management, the study looks at how some of these theories relate to examination management of tertiary educational institutions.

Bureaucratic theory

Developed by Max Weber, the bureaucratic theory of management puts priority on efficiency and thus, emphasizes a firm distribution of power and conforming to strict rules rather than being open to new ideas and flexible work arrangements (Caramela, 2019). Weber posited that precision, speed, unambiguity, knowledge of files, continuity, discretion, unity, strict subordination, reduction of friction and of material, and personal costs are raised to the optimum point in the strictly bureaucratic administration. Caramela (2019) further added that the bureaucratic management theory functions effectively on:

1. clearly defining job roles to individuals which should be strictly stuck to in order to avoid disrupting the hierarchy of authority which promotes power distribution almong workers, based on the skills and abilities of individuals,

2. meticulously keeping record of positions, occurrences or concerns involving the organisation for reference and proper handling of arising issues,

3. hiring only the most ideal candidates with the exact skill set required for the position to ensure best results and to avoid nepotism or exceptions in any way, and

4. maintaining work-appropriate relationships which are only branded by rules and regulations to eliminate any type of personal relationship (such as small talk) in the workplace

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These practices – in relation to examination management – are good as they ensure that personal relationships are not entangled with official responsibilities of examination stakeholders such as lecturers, invigilators, and moderators, among others. Thus, any form of favouritism at every stage of the process is eliminated to ensure successful examinations.

Administrative theory

Henri Fayol developed this business management theory as a simple model of how the management of businesses interact with their personnel (Krenn, 2017). The administrative management theory is broad and consists of 14 principles of management and so making it applicable for almost any form of business. In this vein, Kukreja (n. d.) stated that Fayol suggested that there should be:

1. Division of Work: With this, Fayol's stated that when employees are specialized, their outputs can increase due to the fact that they become increasingly skilled and thereby, efficient. As such, responsibilities in managing examinations should be shared among those involved in the management process, such as lecturers and administrators.

2. Authority: Managers must have the authority to give orders and be mindful of the responsibilities that come with their authority. In managing examinations, stakeholders such as head of departments (HODs) and examination coordinators should be given the power to give instructions and directions to their subordinates.

3. Discipline: Leaderships must uphold discipline in their organisations. This indicates that those in authority should consistently apply discipline

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where applicable irrespective of their relationship with those involved in the incidents.

4. Unity of Command: Employees should have only one direct supervisor.

5. Unity of Direction: Teams with the same objective should be working under the direction of one manager, using one plan. With this, in ensuring the success of the examination process, none of those involved in the process should engage in any form of activity that would derail the process as this will ensure that their collective actions are properly coordinated.

6. Subordination of individual interests to the general interest: The interests of one employee (including managers) should not be allowed to become more important than those of the group. This implies that there should not be any form of compromise for the interest of even the Vice Chancellor of the tertiary educational institution if it goes against that of the whole institution.

7. Remuneration: Employee satisfaction depends on fair remuneration (both financial and non-financial compensations) for everyone. Giving a lecturer or a security personnel adequate remuneration would go a long way to eliminate their appetite for bribes and thus, ensure fairness to all the students or candidates.

8. Centralization: This principle refers to how close employees are to the decision-making process. It is important to aim at an appropriate balance.

9. Scalar Chain: Employees should be aware of where they stand in the organisation's hierarchy, or chain of command.

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10. Order: The workplace facilities must be clean, tidy and safe for employees. Everything should have its place.

11. Equity: Managers should be fair to staff at all times, both maintaining discipline as necessary and acting with kindness where appropriate.

12. Stability of Tenure of Personnel: Managers should strive to minimize employee turnover. Personnel planning should be a priority.

13. Initiative: Employees should be given the necessary level of freedom to create and carry out plans.

14. Esprit de Corps: Organisations should strive to promote team spirit and unity. Those involved in the examination process should be considered as a team. This will eliminate the tendency for pursuing individual interests at the expense of the team's interest.

As a result of this, Fayol's administrative management theory is considered by today's business community as an essential guide to productively managing staff.

Krenn (2017) further stated that based on the principles that constitute the administrative management theory, Fayol concluded that to ensure that managements successfully control and plan their organizations' productions they should interact with their personnel through planning, organizing, commanding, coordinating and controlling. These practices are similar to the process of managing examinations which, according to Adow, Alio and Thinguri (2015), entails setting examination questions, the planning, organising and administering the actual examination, marking, grading and issuing certificates.

1. Planning: This begins the whole process of production. It is the point where management of organisations plan and schedule every aspect of their industrial processes. Thus, this stage is that at which the examination process begins. At this stage, examination coordinators consider what will go into the conduct of the examinations such as the duration of the examination period, the resources needed for teaching and learning as well as writing the examinations, and so on.

2. Organising: With this, Fayol argued that managements of organizations must ensure that all of the necessary resources (raw materials, personnel, etc.) have been put together at the appropriate time of production. This implies that at this point examination coordinators or school authorities should ensure that question and answer papers, desks, examination halls, invigilators, security personnel and all other resources necessary for the successful conduct of the examinations are assembled and made ready for use.

3. Commanding: The administrative management theory states that managements must, at this point, encourage and direct their personnel's activities. This is to indicate that examination coordinators or school authorities ensure that their personnel such as lecturers, are made to know what their roles in the school's examination management are as well as motivated to carry them out as efficient as possible.

4. Coordinating: With this, the administrative management theory of Henri Fayol stated that management must ensure that personnel work together in a cooperative manner. As such, examination coordinators or those in authority should ensure that those involved in the examination process

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such as lecturers, HODs, invigilators, moderators, examination officers and security (examination taskforce) cooperate with each other to guarantee successful examinations.

5. Controlling: According to Fayol, the final management activity is for managers to evaluate and ensure that their personnel follow their instructions. Thus, in managing examinations, it behooves on examination coordinators or authorities to ensure that the activities of those involved in the examination process were carried out as were instructed as a result of their responsibilities.

Systems theory

Proposed by Ludwig Von Bertalanffy, the Systems Theory essentially sees an institution as a system that transforms inputs (e.g., raw materials, people and other resources) into outputs (i.e., goods and services) (Bateman & Snell, 2004). In other words, with the systems theory, organisations are considered as production systems where products or outputs are obtained through the use of raw materials. Production systems interact with their environments in that they will have to acquire inputs for production. Thus, one of the key concepts of the systems theory is that the management teams of organisations must interact with their environment to gather inputs to be turned into outputs of its production.

The examination management process entails setting examination questions, the planning, organising and administering the actual examination, marking, grading and issuing certificates (Adow, Alio & Thinguri, 2015). Thus, stakeholders such as lecturers, examination administrators, parents/guardians and students play essential roles in ensuring successful examination management. Therefore, according to the systems theory, these respective roles

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of the stakeholders become the inputs for a smooth examination management system to produce competent graduates whose grade of certificates commensurate their skills.

The examination management process's quality invariably influences the overall conduct of the actual examination. The rate of occurrence of irregularities or misconducts in a particular examination depends on how each of the stakeholders performs his or her responsibilities before, during and after the examinations. Thus, the occurrence of any form of malpractice or irregularity at any stage of the examination process indicates that some ethical standards have been compromised (Adow et al., 2015). In a production environment, this implies a reduction in the quality of the inputs that the system was fed with.

To ensure that examinations are carried out without any form of examination irregularity or malpractice, rules, regulations, standards and best practices of conducting examinations should not be compromised. Thus, all the stakeholders such as institution authorities, lecturers, administrators, examination office staff, invigilators and students involved in managing examinations at educational institutions (in this case, Takoradi Technical University) should ensure that the principles of good examination management are not violated in order to ensure successful running of examinations in the university.

Examination Management Practices

Management practices before examinations

Examinations are conducted not only on the day of taking the tests. Before the day on which the examinations are taken, several preparations or

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activities take place. Ibara (2008) stated that the examination process starts with deans of the various faculties or schools submitting the courses to be examined to the appropriate authorities after which examination questions are prepared. In constructing the questions for the examinations, Nweze (2009) posited that the test construction should be centred on the level of the candidates and must be based on what the examiner has taught the candidates, not out of syllabus experience. Oyebade (1994) added that departments are requested to submit question papers to the office responsible for conducting examinations, at least a month to the commencement of an examination for the semester and at least two weeks before the beginning of any other examination.

The question papers resulting from the vetted examination questions along with their corresponding marking schemes are then moderated both internally and externally for accuracy and consistency as well as check for coverage of course content (Ibara, 2008). However, before the moderation exercise copies of the timetables for the examinations are made and distributed to the departments (to be displayed on noticeboards) and examination centres for the information of the students. In schools such as the University of Birmingham, University of Liverpool and Aston University, Oyebade (1994) noted that examinations time tables are made and sent to individual candidates.

Furthermore, all the materials necessary for conducting successful examinations are requested after students' registration for the examinations have been duly completed (Ibara, 2008).Regarding the requisition of test materials, Gronlund and Linn (1990) added testing authorities should secure all the examination materials (whether paper-and-pencil or computer-based) in locked rooms or cabinets under constant watch and as well restrict staff involved

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in the examination process from accessing such facilities till the due date to avoid compromising the quality of the examinations as well as invalidating the scores from them. Rukundo and Magambo (2011) also posited that in securing examination materials, testing authorities should ensure that packages containing the test materials are opened and their contents inspected to verify that the appropriate quantities, as requested, have been received and thereafter, resealed.

Having secured the adequate number of examination materials, Rukundo & Magambo (2011) opined that as part of preparations prior to the day of examination, the authorities responsible for conducting examinations in schools should consider that students and parents have been notified of the date and time for the examination; students are reminded to come along with the materials necessary for taking the examination. They asserted that students with special needs (e.g. glasses and hearing aids) should be catered for, adequate plan regarding invigilation is put in place whilst examination administrators have acquainted themselves with the administration procedures (such as timing, examination regulations and test modifications) for the examinations.

Ibara (2008) stated that the examination process continues with the printing and collation of the question and answer papers among others. These are made ready for the subsequent conduct of the examinations after a report stating the eligibility of the students to partake of the examination or otherwise has been generated. Ibara added that as part of the eligibility process in the National Open University of Nigeria, students must have matriculated and registered for the courses to be examined; obtained the study materials of the

course to be examined for at least eight weeks; and submitted three Tutor-Marked Assignments (TMA).

Finally, Rukundo and Magambo (2011) posited that there should be adequate ventilation and lighting in the rooms or centres where the examinations will be conducted with the seats properly arranged in such a way that students cannot look at each other's work easily. These rooms or centres are then secured by locking them up as well as having the writing "Examination in Progress, Do not Enter" posted on the entrance doors.

Management practices during examinations

As Gronlund and Linn (1990) stated, it is imperative for test administrators to ensure that the prevailing conditions during examinations promote success because mishandled conditions during examinations may yield undesired results, irrespective of how much proper preparations have gone into the exercise. Thus, after all the necessary preparations for a successful examination have been duly made with all the appropriate entry requirements met, students enter the examination halls or rooms to participate in the exercise (Ibara, 2008). Subsequently, a list of candidates with their seat numbers which is often published at least 30 minutes before the examinations are started are held in the examination rooms. Thus, entering the examination halls or centres, students are made to sit at the designated desks where their index numbers or examination numbers are placed or written (Babatola, n.d.). Having sat at their designated places, invigilators send the list round for the students or candidates to sign at the beginning of the examinations.

According to Mehrens and Lehmann (1999), the signing of the examination register during the examination exercise is mandatory for each

student. Moreover, during the first thirty minutes and the last fifteen minutes of the examination exercise, candidates may not be allowed entry to and exit of the examination halls respectively. In the event that a candidate is allowed to temporarily leave the examination hall as the examination is in progress he or she is accompanied by an invigilator or a person assigned by an invigilator.

In seeking for any form of clarification in an aspect of the wordings of an examination paper during the examination, candidates are allowed to do so only from an invigilator but not from other candidates. In view of this, expert sources of advice are made available to them at the various examination halls during the course of the examinations by the school or department whose examination papers are being written (Babatola, n.d.). This practice is to help the invigilators (who also have the responsibility of ensuring that all the examinations rules are adhered to and immediately report any infringement) to deal with students' queries that will arise from the examination paper.

To avoid cheating, candidates should not be allowed to enter the examination halls with foreign materials such as printed materials or manuscripts, non-prescribed calculators and personal possessions (Babatola, n.d.). However, candidates are exempted when any such material is explicitly stated in the rubric to the question paper. For example, scientific calculators or mathematical tables may be permitted in an examination hall where there is the need to perform complex calculations and so it would be stated as part of the requirements for taking such an examination.

Furthermore, no invigilator – under any circumstance – is allowed to provide advice or assistance to any individual candidate concerning individual aspects of a paper (Rukundo & Magambo, 2011). As Rukundo and Magambo

posited, if an examination item needs correction or some clarity, it should be done for the entire group of candidates and not an individual. Otherwise, invigilators should ensure they refrain from assisting candidates to answer such an examination item. This is because giving unfair hints to individual candidates who ask for assistance tends to reduce the validity of the examination results as well as lowers the morale of the class.

It is imperative to inform examination candidates of the progress of the examination. As Mehrens and Lehmann (1999) noted, it is the responsibility of the examination supervisors or invigilators to ensure that the candidates are abreast of the time remaining to finish the examinations. For example, Mehrens and Lehmann suggested that students could be informed of the time left at 15-minute intervals.

As the examination candidates require a very good level of concentrations to successfully take the examinations, it is also very essential to avoid interruptions. This could be internal as it may come from an invigilator clarifying an ambiguous examination item to the entire group at the same time which may cause some candidates to lose their concentration. Rukundo and Magambo (2011) posited that the challenge here is that these distractions are mostly beyond the reach of examination administrators or invigilators. However, all other distractions within and outside the examination halls should be eliminated as much as possible.

In addition to avoiding interrupting the candidates' concentration during the examinations, Nweze (2009) suggested that the examination hall must have a non-threatening environment. Students should not, in any way, ever feel intimidated by an invigilator as he or she writes the examination. Feeling

intimidated may put a lot of pressure on the students and hence cause them to forget some of the things they have duly learnt. Nweze further added that the time allotted for the examination as well as examination question papers and answer scripts should be sufficient. Inadequate time allocation may cause candidates to rush in order to cover most of the question before the allotted time for the examination is exhausted as insufficient answer scripts may deprive students the opportunity to answer or attempt more questions to increase their performance.

Finally, examination candidates are not supposed to leave the examination hall until their answered scripts have been handed over to the invigilator in charge. At the end of the examination, invigilators ask all the candidates to remain seated for their answered scripts, pencils, mathematical tables and other materials provided for use in examinations to be collected before they move out of the examination halls.

Management practices after examinations

These are the activities that managements of school examinations have put in place to be carried out after examinations have been written. After examinations are completed, answer scripts are collated and sent to the examination administrators for grading exercises (Ibara, 2008). Rukundo and Magambo (2011) pointed out that in order to have an examination or testing process successfully conducted, there is the need to ensure orderliness in the examination halls until every test material, and document, whether used or unused has been collected and accounted for by the test administrators. To do these, Rukundo and Magambo advised that examination administrators, particularly invigilators, should go through the answered scripts of examination

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candidates to ensure that their number corresponds with the total number of names on the examination attendance register which tends to avoid cases of the attendance register showing a student attending an examination but having his or her script not available. In securing the answered scripts, they could be kept in a secure and lockable facility.

Ibara (2008) added that the standardization process which involves examiners familiarizing themselves with the marking schemes as well as the marking of scripts follow after the answered scripts have been secured. As a part of the quality control measures instituted by some schools, the students' answered scripts which have been graded by course facilitators are then vetted by team leaders in a bid to ensure that the marking exercises are standardized. Ibara further stated that these evaluated scripts are, thereon, sent to external examiners to assess the performance of the markers and the results are then published on noticeboards and the internet for checking after due approval has been given. Babatola (n.d.) added that, principally, external moderations of answered scripts by external examiners are to ensure that standards set for an award are appropriate; students' performance standards are comparable with similar programmes in other schools they are familiar with; and the processes for assessing, examining and determining the awards are sound and fairly conducted.

The outcome of the examination results (which includes coursework marks, module marks, and interim tests) are published and released for students' consumption by posting them on public noticeboards as well as announcing or publishing results at graduation after the scripts have been duly marked and assessed (Babatola, n.d.). However, examination results are personal data of

people which should not be disclosed to others without the owners' or candidates' consent. Thus, the authorities responsible for publishing and releasing examination results will email students and explain to them where, and how they might expect to see their results published.

Ibara (2008) stated that one of the major effective quality control procedures in examination management is getting feedback on the performance of students in examination. In view of this, post-examination analyses are carried out on course basis to identify the grade patterns in the examination. This also helps in measuring the performances of the teachers who are handling the various courses.

Examination candidates are given the opportunity to appeal against their results if they are confident that there have been one or more administrative errors in marking their answer scripts as well as in the calculation or recording of their marks (Babatola, n.d.). As part of the academic appeal process, one is firstly required to discuss his or her concern with the department before making a formal appeal. According to Babatola, such appeals are usually considered on the ground that:

1. There were serious circumstances affecting student which the Programme Board was not made aware when it took its decision.

2. There are procedural irregularities in the conduct of the assessment.

3. There is evidence of biases against a candidate by one or more of the Examiners which was not available at the Programme Board.

Finally, examination misconduct has become an unwanted but integral feature of every examination process in university education. According to Babatola (n.d.), examination misconduct is any inadmissible, unwarranted or

unbecoming behaviour of any candidate during the examination process by engaging in any activity likely to give an undue advantage to him or herself as well as any other candidate. In view of this, when there is evidence of academic misconduct during the examination process, students or candidates are arraigned before the disciplinary committee, and punished, if found culpable (Rukundo & Magambo, 2011). Candidates found guilty of major offences will have the right to appeal against the decision of the Head of Department on specified grounds.

Ethics of Examination Management

Quality assurance in education deals with proactive means of ensuring quality of inputs, teaching-learning process, academic achievement of students and school environment before things get out of hands (Babalola, 2004). In view of this, policies and ethics are put in place, in the spheres of examination management, to ensure that examinations are successfully run without any irregularities. According to Ogunji (2011), the word "ethics" originated from the Greek word "ethos" which simply means character or the doings of good person in order to have good character.

Black, Steele, and Barney (1999) indicated that ethics deals with the responsibilities owed toward humanity and what should be done to make the world a better place. This definition is quite vague as it remains silent on what must be done and not be done. Thus, in order to put the definition of ethics in perspective, Farrell (1996) defined it as "the rules of conduct or principles of morality that point us toward the right or best way to, act in a situation." Similarly, Alutu and Aluede (2005) asserted that ethics can simply be defined as the laid down guidelines, principles, codes of conduct, rules and regulations

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guiding behaviour of a group or an organisation. There are ethical principles that guide every endeavour in life, including examination management whether at formal or informal levels. These indicate that in a situation where the rules and regulations for conducting examinations are not followed by all the stakeholders, there is bound to be a problem to both the validity and reliability of the examination results and certification (Nweze, 2009). The study looks at the examination management ethics for all the stakeholders as follows.

Examination ethics for lecturers

Ogunji (2011) suggested that lecturers (teachers) are supposed to exhibit some expected behaviours to merit their positions in the educational institutions. He itemised them as follows:

1. Develop new skills and improve on the teaching process and give students the confidence to face examination rather than them feeling inadequate and desperate to pass by every possible means,

2. Set examination questions based on the teaching or instructional objectives of courses as well as the course content that has been covered in class. By doing this, students will not feel the need to be involved in cheating since they would have acquired the required knowledge.

3. Maintain and enforce the integrity of the examination process. As core elements in education, teachers usually double as examination administrators, invigilators, and supervisors with the professional role of maintaining examinations' sanctity. Therefore, neglecting this responsibility is sabotaging their efforts.

4. Educate students or candidates on the examination code of conduct and ethics of their institutions, and

5. Desist from compromising the integrity of examination by taking "bribes" from students and be fair to all students.

Examination management ethics for supervisors/administrators

The examination administrators have the core responsibility of creating a conducive environment for the smooth conduct of examinations. To achieve this, Ogunji (2011) posited that examination administrators should:

1. Provide individual timetables for staff, students and invigilators. Invigilation schedule should also be made available to invigilators or supervisors to ensure they are ready and adequately prepared.

2. Conduct pre-examination orientation and briefing for all examination administrators, support staff and candidates – either on face-to-face basis or through mass media announcements and notices to communicate the regulations governing the examinations as well as the code of conduct to candidates and staff.

3. Provide adequate facilities and other resources required for examination such as examination materials, specimen, seats, invigilators, security and refreshments as well as make necessary arrangement to fill unforeseen gaps.

4. Maintain the highest standard of ethics and integrity in conducting examinations and enforce them by training of supervisors and examination management staff.

5. Provide security and ensure confidentiality of the examination. Thus, school and examination administrators should severely deal with examination misconduct cases by either prosecuting or disciplining offenders accordingly to deter others.

Examination ethics for government

According to Nweze (2009), the government of any country, through its Education Ministry, is responsible for creating a conducive and systemic environment for conducting smooth and successful examination devoid of misconducts. In view of this, Ogunji (2011) stated that governments are responsible for:

1. Providing adequate funds for the smooth operations of schools since the availability of funds is critical and considered as an index of quality education.

2. Enacting and enforcing decrees and laws against examination misconducts in schools such as prosecuting offenders or blacklisting offenders and schools deliberately involved in examination misconducts.

3. Maintaining the stability of the academic calendar in order not to disrupt the teaching and learning process.

4. Improving and paying teachers' salaries promptly to avoid situations where they will be in desperate need money.

5. The appointment of efficient and effective leaders with integrity for schools.

6. Requiring adequate school supervision from Ministry of Education

Examination ethics for parents

Though parents and guardians may be considered as being indirectly involved in the examination management process, they tend to play a critical role as the first role models and financiers of students. For this reason, Ogunji (2011) opined that parents and guardians are expected to:

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1. Fully pay up the examination fees of their wards and make sure they are well-registered for the examination to be seated for.

2. Monitor their wards' preparations, especially reading for the examination.

3. Desist from hiring mercenaries for their wards or be part of any arrangement that facilitate cheating in examination but rather provide the needed support in terms of books and equipment to help their wards prepare well for the examination.

4. Take personal responsibility to protect the integrity of examinations.

Shonekan (1996) added that parents and guardians should perceive themselves not only as character moulders but also models for their children and wards, and so they should lead their wards by living exemplary lives. The lives of parents and guardians should be free from corruptible acts so that the students can model behaviours accordingly.

Examination ethics for students

Since they are the ones who are instructed and examined, students – in addition to lecturers – are at the centre of examination management. Though students are mostly preoccupied with passing during any examination, they ethically have the responsibility to (Ojungi, 2011):

1. Acquire the thorough knowledge expected in the different courses by mastering the course on which they are to be tested and prepared adequately for it as lack of such preparations breeds fear and lack of confidence resulting possible examination misconducts.

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2. Check and have the final timetable of each examination as well as confirm all information of any change on the timetable from the examination secretariat, administrators and responsible teachers.

3. Be conversant with code of ethics and conduct governing every examination of the school and, thereby, respect the invigilators, supervisors, examiners and other examination authorities.

4. Be punctual to examination venues by locating examination halls, rooms, or centres early before examination starts.

5. Protect his/her question paper, answer scripts or booklet.

6. Determine to face the examination personally and not rely on any fraudulent approach such as cheating.

7. Follow all examination rules and guidelines to the letter.

Challenges of Examination Management

Administrators of examination in tertiary educational institutions face some challenges in their duty of ensuring that examinations are successfully managed in an incident free manner. Smith and Boyer (1996) posited that the increase in number of students during and after the Industrial Revolution, as a result of compulsory education laws, decreased the use of open-ended assessment, which was harder to mass-produce and assess objectively due to its intrinsically subjective nature. For instance, measurement error is easy to determine in standardized testing, whereas in open-ended assessment, graders have more individual discretion and therefore are more likely to produce unfair results through unconscious bias. When the score depends upon the graders' individual preferences, then the result an individual student receives depends upon who grades the test.

More recently, standardized testing has been shaped in part, by the ease and low cost of grading of multiple-choice tests by computer. Though the process is more difficult than grading multiple-choice tests electronically, essays can also be graded by computer. In other instances, essays and other open-ended responses are graded according to a pre-determined assessment rubric by trained graders. For example, at Pearson, all essay graders have four-year university degrees, and a majority are current or former classroom teachers (Taylor & Rich, 2015).

The study of Njue, Muthaa, and Muriungi (2014) showed that the examination handling and distribution contribute to examination misconducts since the personnel involved in the handling and distribution of examination papers used the examination period for financial gains. This is because some of the personnel had conflicting interests whilst others also lacked integrity in the handling and distribution of examination materials. These posed challenges to the administrators of examination in schools.

In terms of adherence to ethical standards in the management of examination, the study of Njue et al. (2014) revealed that the standards of handling and distribution of examination materials were not really adhered to. This was evidenced in the poor maintenance of records of scripts received by officers managing distribution centres, inadequate security at the centres where examination materials were stored, and poor record keeping of documents issued by officers managing examination centres. These non-adherences to expected standards of examination management therefore lead to malpractices in examination.

Again, in Kenya, Njue et al. (2014) indicated that despite the legal framework put in place, examination irregularities have occurred with every release of results in examinations. Due to concerns on increasing cases of malpractices, several researchers have found various strategies that have been put in place by authorities in schools to curb malpractices in examinations. Mwandikwa and Ocharo (2007) found that the Kenya National Examinations Council (KNEC) instituted tough measures that not only made cheating hard, but also ensures that culprits were severely punished. Some of the strategies included the development of a proposed draft legislation on the administration of examinations and banning of mobile phones in the examination room, and dispatch of additional vehicles and security personnel to support the administrators of examination (KNEC, 2008). The study of Edikpa (2006) also showed that strategies for curbing examination malpractices in schools included good coverage of topics in the syllabus, punishing students who engage in examination malpractice, provision of standard examination halls in schools, nomination of honest teachers as invigilators and examination board being more careful in handling of question papers.

Other strategies found by Edikpa (2006) were organising seminars and workshops on the consequences of examination malpractice to create awareness of the canker (examination malpractice) and establishing examination ethics club in all schools to help instil values in students that are against examination malpractice. Finally, in terms of measures put in place to ensure successful running of examinations, the study of Orji, Madu and Nwachukwu (2013) showed that school authorities were not to aid the students in examinations and

also ensure that strict and elaborate internal security measures have been put in place especially during the development and printing of question papers.

Mitigating Challenges of Examination Managements

Mitigating the numerous challenges encountered in examination management, Shonekan (1996) identified the following strategies as vital:

1. Provision of adequate facilities in terms of textbooks, reading books, well-equipped laboratories and classrooms and a conducive atmosphere for teaching and learning process. If students have acquired the necessary knowledge required to excel, examination malpractice in schools is likely to reduce.

2. The job of lecturers and examination administrators should be made more attractive and comparable with other professions in terms of entry qualifications, facilities, condition of service and remuneration. In this regard, lecturers and examination administrators will not engage in misconducts during examination because of financial gains.

3. Adequate and large examination halls with comfortable furniture should be provided. In doing this, students can be well monitored during examination and thus reduce malpractices during examination.

4. Guidance coordinators and counsellors should help students develop the right study habits so that the students can be fully prepared before examination time. This can help reduce the rate of malpractices in examinations.

5. Rules and regulations regarding examinations such as searching of students should be put in place.

6. The number of invigilators and supervisors should be increased in the exam hall. Exanimation officers and other university authorities should occasionally pay visit to exam halls to observe what is going on. In this way, they could notice any examination misconduct and take the necessary actions to curtail the misconducts.

Furthermore, Kobiowu and Alao (2005) added that challenges that are encountered whiles managing examinations can be surmounted through the following practices:

1. Regular in-depth counselling sessions for parents, students and the general public, on the negative effects of engaging in examination irregularities.

2. Institutions responsible for conducting examinations should consider taking the following steps, to check this trend:

    i. Withholding the results of the affected students.

    ii. Canceling the results of the affected students

    iii. Banning the affected students, and their institutions from taking the subsequent examinations for a period of time.

    iv. Suspending such students from the institutions of learning.

    v. Surcharging such students certain amount of the cost of re-administering the examination again by the body, or the institution concerned. This is because students, who fail their examination at one point or the other, often register again for such examinations.

Conceptual Framework of the Study

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With the overall aim of making research findings more meaningful and acceptable to the theoretical constructs in the research field as well as ensuring its generalizability, the conceptual framework explains the path of a research and grounds it firmly in theory (Dickson, Hussein & Adu-Agyem, 2018). In this way, conceptual framework of a study stimulates the study by providing both direction and impetus to the inquiry.

The conceptual framework adapted for this current study indicates that management of examinations must interact with the environment to gather inputs and turn them into outputs as its product. Thus, the concept of managing examinations effectively dictates that – just as in a production environment – schools systematically process and transform inputs such as materials for effective teaching and learning, and students into outputs such as knowledge growth and employable graduates who will in turn enhance economic and research development (Bateman & Snell, 2004).

Under this conceptual framework the academic inputs (that is, the independent variables) required to successfully manage examinations include clearly stated criteria and procedures for student's admissions, relevant curriculum, conducive teaching and learning environment, availability of adequate teaching and learning resources such as relevant text books, libraries, spacious rooms and adequate desks for writing examinations, internet facilities and stationery (Dickson, Hussein & Adu-Agyem, 2018). The availability of sufficient qualified and competent academic staff and other staff is also considered as inputs in managing examinations. This is because the competence levels of both academic and non-academic staff tend to raise the trust of the stakeholders during the process of administering examinations, invigilation,

marking and scoring results. According to Chilisa and Preece (2005), managing these inputs effectively will ensure that there is good system in place for managing examinations of high-quality examinations in tertiary educational institutions.

The second component of the conceptual framework dwells on the ethics and responsibilities of the stakeholders of examination management in providing conducive working environments at the various schools to ensure successful processes. In addition to the academic inputs stated earlier, all stakeholders in examination education are supposed to duly perform their respective responsibilities towards the successful conduct of examinations (Nweze, 2009). For a successful examination management, lecturers have the responsibility of teaching students all there is to be learnt on the course or subject and set examination questions based on the teaching objectives of courses as well as the course content that has been covered in class whereas examination administrators are responsible for   creating a conducive environment for the smooth conduct of examinations by providing timetables for staff, students and invigilators as well as invigilation schedule for invigilators beside providing adequate facilities and other resources needed for examination and conducting pre-examination orientations and briefings for all examination stakeholders.

Similarly, students have to prepare adequately and master the course on which they are to be tested; be conversant with code of ethics and conduct of examinations in the school and, to respect the invigilators, supervisors, examiners and other examination authorities (Edikpa, 2006). On the part of parents and guardians, they are expected to take personal interest in their wards'

examination by ensuring that they are properly registered for the examination to be seated for as well as monitor and contribute to their wards' preparations for the examination by providing them the needed books and equipment.

Consequently, the dependent variable of the study which is either the success or failure of the entire examination process relies heavily on whether all the stakeholders of the process consciously and objectively perform their respective duties. In this vein, the reliability and consistency that is associated with successful examinations is likely to be disturbed if any of the stakeholders does not do what is required of him or her. However, if each and every stakeholder diligently performs the responsibilities assigned him or her, the results from the examination will be authentic and credible indicating a successful examination. To aid in simplifying the conceptual framework of the study, Figure 1 was constructed by adopting the concept of Ogunji (2011) and presented as follows:
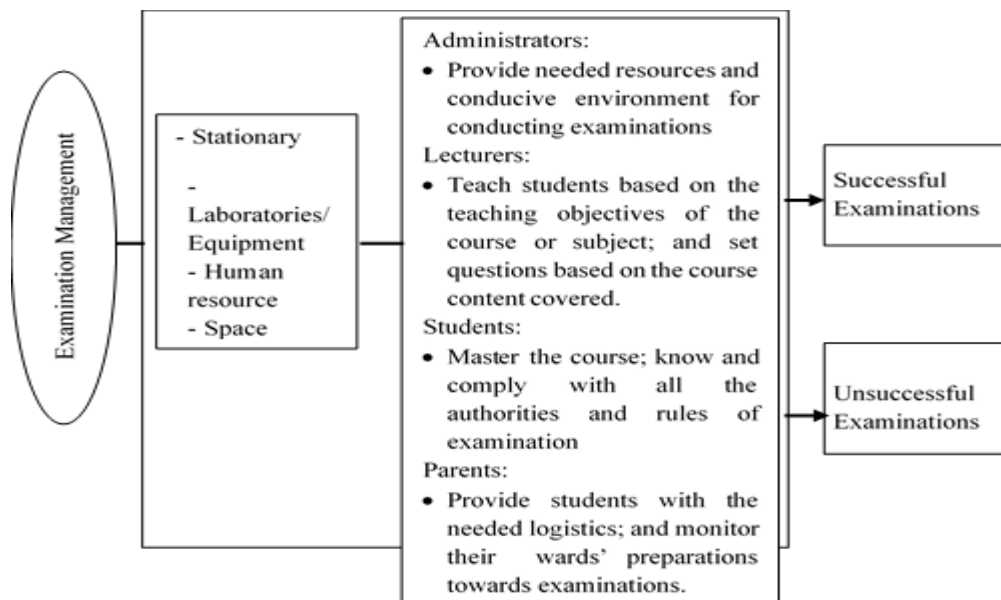
Figure 1: Relationship between Examination Management Practices and Examinations

Source: adopted from Ogunji (2011)

Chapter Summary

This chapter looked at the relevant literature associated with the tests or examinations administration of tertiary institutions. It consists of brief history of examinations in the early days; importance of educational testing or examinations; management theories; the concept of examination and examination management; policies and ethics of examination management; challenges of examination managements; solutions to challenges of examination management, and conceptual framework of the study. The study identified that examination originated from China and was used to assess candidates into the Chinese civil service.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter presents the methodological approach adopted in carrying out data collection and analysis. It comprises the research design, study area, population, sampling procedures, instrumentation, data collection procedures and data processing and analysis.

Research Design

A research design is the structure of the study or research that specifies the methods and procedures for collecting and analysing the needed information in a research study (Trochim, 2006). In addition to this, a study's design plays a very significant role because it spells out the kind of data that is required, the methods to be employed to collect and analyse the data obtained from the survey as well as how all these facets of the study ensure that the study's research questions are adequately answered (Van Wyk, 2012). Thus, taking into consideration both practical and theoretical constraints of the study, the research design of a study ensures that the data and methods as well as the manner in which they are arranged in the study are effective in providing answers to the study's research questions.

The study adopted the descriptive research design because the study thought to describe how examinations are managed at Takoradi Technical University(TTU). The respondents are also literate and could provide independent response and information regarding the research questions.

Furthermore, frequencies and percentages of respondents are required for analysis in this current study, hence the need to adopt the quantitative

approach. This study adopted the descriptive research design. The descriptive research design was employed because the study seeks to observe, document and describe aspect of a situation as they are in their unadulterated state and may, as such, help to uncover new facts and meanings in order to assess the veracity of the result (Labaree, 2009; Polit & Beck, 2003)

Study Area

The study was conducted in Takoradi Technical University (TTU) which was formerly known as Takoradi Polytechnic. Takoradi Technical University is a public tertiary educational institution located in the Sekondi-Takoradi Metropolis of Western Region and was established in April 1954 as a Government Technical Institute (named Takoradi Technical Institute) under the control of Ghana Education Service of the Ministry of Education. The institute was awarding certificates of Royal Society of Arts (RSA) and City and Guilds of London, United Kingdom after mainly training learners in programmes at the Craft and Technician Certificate levels in commercial and technical subjects. However, through the Ghana Education Service, the Government took over the awarding of the above-mentioned certificates in 1990 (Takoradi Technical University, 2017).

Through the reforms in the education sector by the Ghana Education Service which began in the 1980s, the then Takoradi Technical Institute and other five similar institutions were upgraded to a polytechnic status by the promulgation of PNDC Law 321 in 1993. Per the mandates of PNDC Law 321, these newly formed polytechnics were to complement the role of the universities to increase access to tertiary education for the training of middle and higher-

level manpower. Thus, they began to offer Higher National Diploma (HND) programmes in the 1993/1994 academic year.

Subsequently, in 2014, the Ministry of Education proposed a Bill which was considered by Cabinet of Government and passed by Parliament as an Act with the sitting President's assent in August 2016 to convert Takoradi Polytechnic and other polytechnics into full-fledged technical universities. Thus, the Takoradi Polytechnic Council adopted the name "Takoradi Technical University" which was duly registered with the Registrar General's Department of Ghana and became fully functional in September 2016.

With three (3) campuses, namely: Effia-Kuma (Takoradi), Butumagyebu (Sekondi) and Princess Akatakyi (Agona-Nkwanta), Takoradi Technical University consists of four faculties. These are the Faculty of Business (which occupies the Butumagyebu campus), Faculty of Engineering, Faculty of Applied Sciences and the Faculty of Applied Arts (all of which are situated on the Effia-Kuma campus which is the main and original campus). Table 1 presents the departments that constitute the faculties in TTU.

Table 1: Faculties of Takoradi Technical University and their Departments

Faculty	Department
Business	Accountancy
	Marketing
	Purchasing and Supply
	Secretaryship and Management Studies
Engineering	Building Technology
	Civil Engineering

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Table 1 Cont'd

	Electrical/Electronics Engineering
	Mechanical Engineering (Plant & Prod.)
	Mechanical Engineering (Auto, Ref. & Air Cond.)
Applied Science	Computer Science
	Hospitality Management
	Mathematics and Statistics
	Science
	Tourism
Applied Arts and	Ceramics
Technology	Fashion Design and Technology
	Interior Design and Technology
	Graphic Design
	Painting
	Sculpture
	Textiles Design and Technology

Source: Field Survey (2018)

The Akatakyi Campus of Takoradi Technical University is the newest and the largest of the three campuses, with an acreage of 152.3 (TTU, 2017).

Population

Heiman (2011) defines the population (sometimes referred to as the Target population) of a study as the entire group of individuals, objects and scores among others to which the conclusions of that study apply, based on the observation of a portion of the population. This means that a study's population consists of all the units for the study which share some common characteristics

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of interest to the researcher. In view of this, the population for the study included all persons who are involved in the examination process at Takoradi Technical University such as the administrators in the various departments as well as at the institution's examination unit, heads of department, lecturers (who are also the invigilators), faculty officers and the entire student body.

The total population for the study was 8,271. The breakdown for the various categories of individuals who formed the population for the study is shown in Table 2.

Table 2: Population Distribution by Designation

Designation	Number
Heads of Department	20
Invigilators (who are also lecturers)	349
Faculty Officers	5
Examination Coordinators	13
Examination Unit Officers	3
Security Officers	77
Students	7,804
Total	8,271

Source: Field Survey (2018)

It should be noted that the academic staff (Table 3) was made up of associate professors, senior lecturers, lecturers, assistant lecturers, principal instructors, senior instructors, instructors and assistant instructors of the various departments of TTU. Of these, some are given the designations such as HOD, invigilators and examination coordinators.

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Table 3: A Distribution of Takoradi Technical University's Teaching and Learning Population

Departments	Academic Staff	Students			Total
		HND	B. Tech	Total	
Graphics	32	655	0	655	687
Textile	17	47	19	66	83
Painting	7	67	74	141	148
Sculpture	13	29	0	29	42
Ceramics	8	29	0	29	37
Liberal Studies	31	0	0	0	31
Fashion	28	231	16	247	275
Mathematics & Statistics	25	71	0	71	96
Computer Science	16	160	0	160	176
Tourism	11	149	21	170	181
Hospitality Management	23	304	21	325	348
Accountancy	26	907	109	1016	1042
Marketing	21	526	0	526	547
Purchasing	17	1330	0	1330	1347
Secretaryship & Management	15	284	30	314	329
Building	13	256	17	273	286
Civil	25	351	25	376	401
Estate Management	0	0	6	6	6
Furniture	11	13	0	13	24
Electrical	12	602	0	602	614
Mechanical	32	1,373	82	1,455	1,487
Total	383	7,384	420	7,804	8,187

Source: Field Survey (2018)

Sample and Sampling Procedure

Ofori and Dampson (2011) opine that a sample for a study is the segment of the population that is selected for investigation to help draw conclusions to be generalised to the population. It is mostly impracticable to include the entire

population in a study due to time and other resource constraints, errors resulting from fatigue as well as the unavailability of members of the population (Sekaran, 2003). According to Saunders, Lewis and Thornhill (2009), samples for research works are selected based on factors such as:

1. the confidence level (i.e., the level of certainty that the characteristics of the data collected represent those of the total population);

2. the margin of error that can be tolerated (i.e., the accuracy required for any estimates made from the sample);

3. the types of analyses you are going to undertake; and

4. the size of the total population from which sample is being drawn.

As such, a sample size of 370 was selected in accordance with Bartlett, Kotrlik and Higgins (2001) table for determining sample size (Appendix C). They proposed a minimum sample size of 367 for a population of about 8000. However, the researcher approximated it to 370 (see Table 4). The study employed census, quota and purposive sampling techniques to select the respondents for the investigation. Table 4 presents the type of sampling techniques employed for selecting the respondents from the various categories of designation.

Table 4: Sampling Techniques used in Selecting Respondents

Category	Sample	Technique
Administrators	41	Census
Invigilators	82	Purposive
Security Officers	49	Purposive
Students	198	Quota
Total	370	

Source: Field Survey (2018)

First and foremost, the quota sampling technique, which is a non-probability sampling technique that assigns quotas to be filled from the different categories of the respondents, with some restrictions on how they are to be filled (Kothari, 2004) was used. In other words, the researcher's own discretion was used to select the actual sample. The quota sampling was employed to select student respondents because TTU employs a university-wide examination timetable with designated places for the conduct of examinations. Students from different departments assemble at the same venues for examinations, hence the variability in courses or programmes to be taken as examination.

The administrators consisted of 20 heads of departments, five (5) faculty officers, three (3) examination unit officers as well as 13 examination coordinators and all of them were selected for the study because they were in positions to respond appropriately to the instrument and more so they were few (thus census technique).

To complete the sample units or members, 82 invigilators (lecturers, instructors and teaching assistants) and 49 security officers (at both the academic departments and the examination centres) as well as 198 students were purposively selected. The purposive sampling technique is a technique that allows researchers to intentionally select sampling units to study and understand a phenomenon (Creswell, 2009). In this vein, the said sampling technique was applied because the researcher approached the head of the university examination officer for the list of invigilators who had at least three chances of invigilating. The purposively selected security officers were also involved at various stage of examination management at TTU. Creswell added that the purposive sampling helps to narrow down a sample based on specific

phenomena which, in this case, is the respondents' knowledge of the examination management in the technical university.

Data Collection Instruments

The data gathered instruments were questionnaires. A questionnaire is a research instrument used in a survey made of carefully constructed questions to obtain self-reported answers about general and personal issues (Gravetter & Forzano, 2009). The questionnaire was adapted from (Amedahe, 2002). It was used to collect the data for the study due to its effectiveness in securing factual information about practices, opinions and attitudes of research subjects. Based on the work of Amedahe (2002), two sets of questionnaires were developed for the study. Each set was given to student respondents and staff respondents respectively. The constituents (six sections) of the questionnaires for both students and staff were as follows (see Appendices A and B):

1. Demographic Characteristics

2. Examination Management Practices before Examinations

3. Examination Management Practices during Examinations

4. Examination Management Practices after Examinations

5. Challenges Faced in Managing Examinations, and

6. Measures to Improve the Exams Management Practices.

These instruments were predominantly close-ended with some few open-ended questions. The former was on a four Likert scale indicating *strongly agree*, agree, *disagree*, and *strongly disagree*.

Pre-testing of Instruments

According to Nanda, Gupta, Kharub and Singh (2012), the last decade has seen an increased emphasis on producing quality questionnaires through

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pretesting as they are pivotal in achieving high quality in a survey. Czaja (1998) generally defined pretesting as the testing of a set of questions or the questionnaire on members of the target population either in the field, an office or in a laboratory setting. The process of pre-testing is the final and, invaluably, the most vital stage of the questionnaire design process as it unearths any unforeseen problem with the wording of the questionnaire or question items so as to improve on reliability and validity of the instrument for the main study.

It is worth noting that there are several techniques such as focus group, informal test, expert group, cognitive interview and observational interview used in conducting questionnaire pre-tests (Nanda et al., 2012). As such, the choice of using any of them is solely dependent on the aims or the objectives of the pretesting. In view of this, this study employed the Informal Test technique – which, according to Nanda et al., are basically unstructured reviews with either individuals or a group of questionnaire design experts or other colleagues – for pre-testing the questionnaires for the study.

In conducting the pre-testing of the questionnaires, initial drafts of the two types of questionnaires for the study were presented to the study's supervisor for his inputs. As a result of his contributions, some changes were made to the instruments and given to 20 students and 5 staff of Takoradi Technical University respectively for pretesting. The researcher pre-tested the instruments at Cape Coast Technical University (CCTU), which has similar characteristics with the main study area (Takoradi Technical University). The focus of the pre-test was to identify any form of ambiguity regarding the instruments to improve on their comprehension in the main study.

After they evaluated the questionnaires, a few issues were identified and subsequently resolved. Table 5 presents a summary of issues that came up during pretesting.

Table 5: Summary of the Pre-testing of the Data Collection Instruments

		Observed		Unobserved		Total	
		Freq.	Percent	Freq.	Percent	Freq.	Percent
Students	Misunderstood questions	12	60.0	8	40.0	20	100.0
	Typographical errors	4	20.0	16	80.0	20	100.0

Source: Field Survey (2018)

Table 5 shows that all staff of CCTU identified some errors in the typing of their respective questionnaire with no problem in understanding the content. The students, on the other hand, mostly had issues with understanding some of the questions, with only 20% of them being able to identify the typographical errors in the wording of their questionnaire. Having resolved the issues that arose from the pre-test exercise, final questionnaires were made and printed for distribution. However, in order to assess the validity as well as the reliability of the instruments a pre-testing of instruments was conducted using Cape Coast Technical University. Cape Coast Technical University was considered as the appropriate institution because it shares similar characteristics with Takoradi Technical University.

According to Ogah (2013), the content validity of an instrument deals with the quantity and coverage of the instrument whilst its reliability looks at

the consistency of the instrument in measuring a particular attribute. In this vein, the validity of an instrument assesses whether the instrument measures what it is supposed to measure whilst the reliability of such an instrument assesses whether the instrument is able to give the same or similar result on some attributes of the sample or population even when they are used elsewhere or by a different researcher.

Using a data set collected from a total of fifty (50) respondents from the Cape Coast Polytechnic, the reliability values of both instruments were obtained through the use of the Cronbach Alpha co-efficient after conducting the pilot test. The results indicated that the questions on the questionnaires were good in assessing the examination management practices (with Cronbach Alphas of 0.740 and 0.703 for the staff and students of the polytechnic respectively). The respondents for the pilot test were made up of five (5) administrators, ten (10) invigilators, five (5) security officers and thirty (30) students.

Reliability Tests

As part of ensuring that the data collection instruments used for the study produce reliable data and, subsequently, valid results, the reliability analysis was applied to the various sections of the two sets of questionnaires. The analysis was also conducted on the overall items or questions on the questionnaires and the results are presented in Table 6.

It can be observed from Table 6 that the section D of the sets of the questionnaires for staff and students recorded alpha values of 0.503 and 0.675 respectively. These values are below the standard of 0.7. However, with the study being that of a social science background, the values could still be used for validity and reliability.

Similarly, with Cronbach's Alphas of 0.725 and 0.863 for the questionnaires for the staff and students of Takoradi Technical University respectively, there is the indication that the questions on both questionnaires are valid in being used to assess the examination management practices of the institution. It should be noted that the Cronbach Alpha reliability test was conducted on the various examination management activities or practices that TTU engages in. However, for the sake of clarity, the results of the reliability analyses are presented in Table 5.

Data Collection Procedures

The data gathering process for the study covered over a period of four weeks. In collecting the data for the study, a letter of introduction which sought to explain to the respondents the purpose of the study as well as how confidential every data that they provide would be treated was taken from the Institute for Educational Planning and Administration (IEPA) at the University of Cape Coast. A copy of the letter was made and sent to the office of the registrar of Takoradi Technical University for permission to conduct the study using their institution. Upon consultations with the Pro Vice Chancellor of the university, the registrar sent memos to the various heads of department to give the researcher the needed assistance in conducting the study. Along with the heads of department, permissions were personally sought from the lecturers and the administrators who were available as mails were sent to those not available. Despite these, the purpose of the study as well as the assurance of the respondents' anonymity and confidentiality were always explained to the respondents to continually boost their confidence in the study. The respondents

were made to understand that participating in the study was voluntary and so their participation was solely dependent on their own desires.

Furthermore, self-administered questionnaires were given to the administrators, lecturers, security officers and students to complete, with those who did not have much time to spare but willing to participate assisted by the researcher by filling in the responses to the questions on the questionnaire as they provided their answers.

Data Processing and Analysis

Since the data that was gathered were both quantitative, the analysis was done using quantitative and method. The quantitative data obtained from the questionnaire were coded and entered into the Statistical Product and Services Solution (SPSS) version 23. Specifically, the analysis was done according to the research questions of the study. Table 6 presents the specific kinds of statistical tools that were employed in analysing the data based on the research questions.

Table 6: Specific Statistical Analysis Tool used Analysing the Data

Respondent	Research Question	Statistical tool (s)
Staff/	One	Percentages; Means
Administrators	Two	Means
	Three	Percentages;; Means
	Four	Percentages; Means
Students	One	Percentages; Means
	Two	Means
	Three	Percentages; Means
	Four	Percentages; Means

Source: Field Survey (2018)

The analysis of the data from the questionnaires – based on the research questions – was done using descriptive statistical tools such as percentages, and means. This applied to all the research questions under investigation.

Ethical Consideration

Research is a dynamic process, which involves researchers and respondents, and which is based on mutual trust and cooperation, as well as on promises and well-accepted conventions and expectations. It is important that the rights and freedom of the respondents are respected. Data that were obtained from the respondents through survey were handled with confidentiality. This was to ensure that no other person than the researcher had access to the information apart from the purpose for which the data was obtained.

It was also ensured that no respondent was identified with the kind of information they provided. That is, the respondents were assured the ethics of anonymity. The consent of the respondents was also obtained before they were approached to provide information for the research. This was done to ensure that their privacy was not compromised or intruded. Permission letters from the Director of the Institute of Educational Planning and Administration, UCC were obtained and sent far in advance before the respondents were approached. This was to ensure that the consent of the respondents and the authorities in the Takoradi Technical University had been sought. In an instance where the respondents felt hesitant to provide some vital information for the research in answering the questionnaire, their rights in this regard were respected by freely allowing them to withhold any information they so wished.

Chapter Summary

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The chapter dealt with the methodology employed conducting the entire study. In view of these, it was made up of the research design, study area, population, sampling procedures, instrument, data collection procedures and data processing and analysis. With the purpose of investigating the current state of practices in managing examinations at Takoradi Technical University with attention on the practices before, during and after examinations, the study was conducted using the descriptive research design. All persons involved in the examination process at Takoradi Technical University such as the administrators at the various departments and at the examination unit, heads of departments, lecturers, faculty officers and the entire student body constituted the population of the study. A sample of 370 respondents which was determined through the use of the Bartlett, Kotrlik and Higgins (2001) sample size determination table was chosen through the census, quota and purposive sampling techniques. The data for the study was then gathered from these respondents using two self-administered questionnaires – each for the staff and students. The data was analysed using techniques such as means, percentages and reliability analyses (using Cronbach's Alpha).

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the results and discussion of the study. In view of this, it is worth noting that the study sought the purpose of investigating the current state of practices in managing examinations at Takoradi Technical University with attention on the practices before, during and after examinations. The study was conducted using the descriptive research design on persons involved in the examination process at Takoradi Technical University such as the administrators at the various departments and at the examination unit, heads of department, lecturers (who double as invigilators), faculty officers and the student body. From these, a sample of 370 respondents which was determined using Krejcie and Morgan's (1970) table for sample size determination through a combination of census, quota and purposive sampling techniques. The data for the study was then gathered from these respondents using two self-administered questionnaires – each for the staff and students. The data was analysed using descriptive statistics such as percentages, means and standard deviations.

The results have been presented in the tables according to the three research questions posed. Conversely, Tables 7 to 10 carry some essential introductory information about the respondents' socio-demographic characteristics, years spent with TTU and number of examinations written.

Demographic Characteristics of Respondents

The demographic characteristics of the respondents (both staff and students of TTU) used in the study are presented in Table 7. These

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characteristics of the respondents include their gender and the academic departments in which the staff worked and the students were admitted.

Table 7: Demographic Characteristics of Respondents

| | Respondents | | | | | |
| | Staff | | Students | | Total | |
Characteristics	Frequency	Percent	Frequency	Percent	Frequency	Percent
Gender						
Male	90	65.7	134	71.7	234	72.2
Female	47	34.3	53	28.3	100	27.8
Total	137	100.0	187	100.0	324	100.0
Department						
Graphics	2	1.5	15	7.8	15	4.5
Textiles	1	0.7	1	0.5	2	0.6
Fashion	4	2.9	34	17.6	38	11.5
Accounting	8	5.8	5	2.6	13	3.9
Marketing	4	2.9	15	7.8	19	5.8
Purchasing	6	4.4	10	5.2	16	4.8
Secretaryship	12	8.8	2	1.0	14	4.2
Tourism	12	8.8	2	1.0	14	4.2
Computer	6	4.4	3	1.6	9	2.7
Science	2	1.5	15	7.8	17	5.2
HCIM	8	5.8	9	4.7	17	5.2
Mechanical	14	10.2	4	2.1	18	5.5
Mathematics & Statistics	16	11.7	31	16.1	47	14.2
Electrical	13	9.5	47	24.3	60	18.2
Administration	29	21.2	0	0	29	8.8
Total	137	100.0	193	100.0	330	100.0

Source: Field Survey (2018)

It can be observed from Table 7 that 234 out of the 324 respondents for the study were males (65.7% staff and 71.7% students). On the other hand, the 27.8% of the rest of the respondents were females. This implies that the respondents for the study were dominated by males.

Table 7 also shows that the departments with the most number of staff representation were the Administration (21.2%), Mathematics and Statistics (11.7%) and Mechanical Engineering (10.2%) whilst the Textile Department had the least staff representation with 0.7%. Similarly, the Textile Department recorded the least representation of students with 0.5% whilst those with higher representations of students were the Electrical (24.3%), Mathematics and Statistics (16.1%) and Fashion (17.6%) departments. These imply that the respondents for the study consisted mostly of staff and students from the Electrical, Mathematics and Statistics and Fashion departments.

Table 8 captures the duration of working with Takoradi Technical University. A little over a quarter of the staff had worked with Takoradi Technical University for a maximum of five years. Most of them (45%) reported that they had worked with the institution for between 6 and 10 years whilst only about 9% of them reported that they had worked there for more than 15 years. These working durations of respondents imply that most of the staff had worked with the institution for quite a long time and so were quite familiar with examination management practices in TTU.

Table 8: Duration of Working with Takoradi Technical University

Duration	Frequency	Percent
1 – 5	37	27.0
6 – 10	62	45.3
11 – 15	26	19.0
16 – 20	5	3.6
21 – 25	7	5.1
Total	137	100.0

Source: Field Survey (2018)

It can be observed from Table 9 that students engaged in the study were either in their second or third academic year of tertiary education. Three-thirds of the students (75%) were experiencing their second academic year in TTU whilst a quarter of them (25%) reported that they were in their third academic year.

Table 9: Academic Year of Students

Academic Year	Frequency	Percent
Year II	144	75.0
Year III	48	25.0
Total	192	100.0

Source: Field Survey (2018)

A little over half of the students (51%) reported that they had written three examinations during their education at Takoradi Technical University (Table 10). About a quarter of the students reported that they had written five examinations organised by TTU whilst about 10% of them indicated that they had written only two. These imply that a minimum number of examinations the

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students had written in TTU was two with most of them having written at least three examinations.

However, considering the fact that Table 9 revealed that 75% of the students engaged in the study were in their second year, one would expect that most of them would have written a maximum of three examinations organised by TTU. This suggests that quite a number of the students engaged in the study had written re-sit examinations organised by the institution.

Table 10: Number of Examinations Written

Number	Frequency	Percent
Two	20	10.4
Three	99	51.3
Four	26	13.5
Five	48	24.9
Total	193	100.0

Source: Field Survey (2018)

Research Question One: What is the current state of examination management in the Takoradi Technical University?

Current State of Examination Management at Takoradi Technical University

The study sought to investigate the current state of the practices employed by Takoradi Technical University in the management of its examinations. In this regard, the study looked at the practices that the institution employs before, during and after examinations. The results of the analyses are presented in Table 11 through Table 16.

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Activities carried out in TTU before examinations

This section looks at the practices that are carried out by Takoradi Technical University before the actual days of examination. In view of this, the study solicited the views of both the staff and students of the institution. Tables 11 and 12 present the results of the analyses on views of the staff and students of TTU respectively.

Table 11: Staff's Views on Activities carried out in TTU before Examinations

Practices	N	Mean	Std. Dev.
There are rules and regulations regarding conduct of examinations at TTU	134	3.69	0.512
Examination questions are set by lecturers who handle the courses	136	3.70	0.535
Examination questions are moderated by internal assessors	132	2.39	1.068
Examination questions are moderated by external assessors	128	3.35	0.749
Moderated questions are kept in the custody of lecturers	131	2.24	1.059
Moderated questions are kept in the custody of HODs	129	3.05	0.841
Moderated questions are kept in the custody of Exams unit of TTU	124	2.31	1.114
Examination questions are printed by lecturers	133	2.01	0.989
Examination questions are printed by HODs	135	1.76	0.815
Examination questions are printed by Exams unit of TTU	130	2.26	1.038

Table 11 Cont'd

Examination questions are printed by examination coordinators	131	3.11	0.917
Examination coordinators have enough logistics to work with	133	2.70	0.904
Printed examination questions are in the custody of lecturers	127	1.91	0.877
Printed examination questions are kept in the custody of HODs	133	1.98	0.883
Printed examination questions are kept in the custody of exams unit of TTU	135	2.36	1.109
Printed Examination questions are kept in the custody of examination coordinators	132	3.14	0.884
There are rules and regulations regarding the conduct of invigilators and examination officers of TTU	134	3.40	0.705
There are rules and regulations regarding the number of candidates per invigilator during examinations	136	3.15	0.851
Candidates are given handbooks on the rules and regulations regarding the conduct of examinations	135	3.36	0.728
Candidates are familiar with the rules and regulations regarding the conduct of examinations	136	3.24	0.702
Examination timetables are timely provided	135	3.41	0.638
Invigilators and students report to examination halls on time	135	2.75	0.904
Overall mean	22	2.79	0.856

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49;
Strongly agree = 3.5 – 4.0
Source: Field Survey (2018)

With means between 1.76 and 2.39, the staff of Takoradi Technical University indicated that the examination questions are not moderated by internal assessors (2.39); moderated questions are not kept in the custody of lecturers (2.24) and the examination unit (2.31); examination questions are not printed by lecturers (2.01), HODs (1.76) and examination unit (2.26); printed questions are not in the custody of lecturers (1.91), HODs (1.98) and examination unit (2.36). With standard deviations ranging from 0.815 to 1.114 suggest staff disagreement on these question items did not vary much.

Conversely, the staff averagely admitted that TTU has rules and regulations regarding the conduct of their examinations (3.69) and so examination questions are set by lecturers who handle the courses (3.70). The remaining views of the staff on management practices before examination days recorded means of 2.70 - 3.41 indicating their agreement to such practices. These imply that TTU has rules and regulations on how their examinations were conducted. These include: providing timetables on time; course lecturers setting their own examination questions; invigilators and students reporting to examination halls on time; examination coordinators having adequate logistics to work with; external assessors being in-charge of moderating examination questions and keeping such questions as well as printed ones with the HODs before being printed by examination coordinators. There are also rules and regulations on the conduct of invigilators and examination officers; the number of candidates per invigilator during examinations should be given in handbooks to candidates to familiarize themselves with.

Table 12 presents the results of the analyses on the views of the students regarding the activities of TTU before examinations are written.

Table 12: Students' Views on Activities carried out at TTU before Examinations

Practices	N	Mean	Std. Dev.
Candidates are given handbooks on the rules and regulations regarding the conduct of examinations	191	3.18	0.962
Candidates are familiar with the rules and regulations regarding the conduct of examinations	189	3.17	0.854
There are rules and regulations regarding conduct of examinations in TTU	187	3.56	0.622
There are rules and regulations regarding the conduct of invigilators and exam officers of TTU	189	3.12	0.870
There are rules and regulations regarding the number of candidates per invigilator during examinations	190	2.68	0.930
There are rules and regulations regarding spacing among candidates during examinations	189	3.04	0.859
Examination timetables are timely provided	190	3.41	0.770
Invigilators and students report to examination halls on time	188	3.10	0.710
Required maintenance works on examination halls are carried out	192	3.04	0.840
Examination halls are set up for writing examinations	191	2.99	0.874
Overall mean	12	3.13	0.829

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49; Strongly agree = 3.5 - 4.0
Source: Field Survey (2018)

It can be observed from Table 13 that with a mean of 2.68, the students indicated that there were rules and regulations regarding the number of candidates per invigilator during examinations. However, this mean is quite close to 2.49 (the maximum mean for *disagree*) and so indicates that there are split views among the students on the availability of rules and regulations on

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the number of candidates per invigilator during examinations. On the other hand, the students reported very strong agreement that there are rules and regulations regarding conduct of examinations in TTU (3.56) and examination timetables are timely provided (3.41).

With an overall mean value of 3.13 and a standard deviation of 0.829, it can be observed from Table 12 that the students generally indicated that before their examinations, they familiarized themselves with the rules and regulations on spacing among candidates during examinations, the general conduct of examinations, the number of candidates per an invigilator during examinations, the reporting time of invigilators and students to examination halls and the conduct of invigilators and examination officers are contained in the rules and regulations handbook given them. They also indicated that the examination halls were well-maintained and set up with timetables provided on time.

The results in Tables 11 and 12 indicate that TTU has rules and regulations regarding how examinations were conducted in their institution. However, the results reveal that TTU's examination practices before examinations still need to be improved as they allow moderated and printed examination questions to be in the custody of examination coordinators. Yes, examination coordinators are pivotal in conducting examinations! However, they are still humans and can be fallible. This practice contradicts that of Gronlund and Linn (1990) who cautioned that testing authorities should secure all the examination materials (no matter its nature) in locked rooms or cabinets under constant watch and as well restrict all staff involved in the examination process from accessing such facilities till the due date to avoid compromising the quality of the examinations as well as invalidating the scores from them.

Activities carried out at TTU during examinations

This section looks at the activities that are carried out by Takoradi Technical University during the actual days of examination. In view of this, the study solicited the views of both staff and students of the institution. Tables 13 and 14 present the results of the analyses on views of the staff and students of TTU respectively.

Table 13: Staff's Views on Activities carried out at TTU during Examinations

Practices	N	Mean	Std. Dev.
Examination halls are well lighted during examinations	137	2.69	0.944
Examination halls are well ventilated during examinations	137	2.66	0.951
There rules and regulations regarding spacing among candidates during examinations	135	2.67	0.976
Adequate question papers and answer booklets needed for examinations are provided	135	2.92	0.947
Adequate time is allocated to the various examination papers	135	3.36	0.685
Invigilators are fair to every student during examinations	137	3.16	0.678
Students comport themselves well during examinations	137	2.61	0.657
There are enough members in the examination taskforce to carry out their duties effectively	137	2.94	0.820
Overall mean	8	2.88	0.832

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49; Strongly agree = 3.5 - 4.0
Source: Field Survey (2018)

It can be observed from Table 13 that, with the mean range of 2.61 - 2.69, most of the staff of Takoradi Technical University indicated that their examination halls were well-lighted (2.69) and well-ventilated (2.66) during

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examinations and that there are rules and regulations regarding spacing among candidates during examinations (2.67). They also indicated that the students comport themselves well during examinations (2.61). However, since the mean values are close to 2.49, it reveals that a good number of them were not in agreement. Table 13 also shows that most of the staff strongly agreed that during examinations: adequate question papers and answer booklets are provided (2.92); adequate time is allocated to the examination papers (3.36); invigilators are fair to every student (3.16); and, enough members of the examination taskforce are provided to carry out their duties effectively (2.94).

The results of the analyses on the views of the students regarding the activities of Takoradi Technical University during examinations is presented in Table 14.

Table 14: Students' Views on Activities carried out at TTU during Examinations

Practices	N	Mean	Std. Dev.
There is adequate time allocated to the various examination questions	191	3.01	0.846
Invigilators are fair to every student during examinations	190	2.75	0.918
Examination halls are well lighted during examinations	190	3.03	0.826
Examination halls are well ventilated during examinations	187	2.96	0.897
There rules and regulations regarding spacing among candidates during examinations	190	2.95	0.831
Adequate question papers and answer booklets needed during examinations are provided	190	3.28	0.825
Students comport themselves well during examinations	189	3.11	0.778
There are enough members in the examination taskforce to carry out their duties effectively	189	3.08	0.788
Overall mean	9	3.02	0.839

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49; Strongly agree = 3.5 - 4.0
Source: Field Survey (2018)

Table 14 depicts that, on the average, the students of TTU indicated that the invigilators are fair to every one of them during their examinations (2.75). Similarly, Table 14 also shows that there are rules and regulations on spacing among candidates in examinations halls (2.95) as well as the examination halls being well-lighted (3.03) and well-ventilated (2.96). They also strongly indicated that there was adequate time for examinations (3.01), question papers and answer booklets (3.28) and examination taskforce members are provided (3.08) as well as students comporting themselves well during examinations (3.11).

The results from Tables 13 and 14 indicate that the examination halls are well lighted and ventilated as Rukundo and Magambo (2011) posit that there should be adequate ventilation and lighting in the rooms or centres where the examinations will be conducted with the seats properly arranged in such a way that students cannot look at each other's work easily. However, the students of TTU had their reservations regarding the fairness of the invigilators who double as staff of the institution though the staff indicated that they were fair to every student. This development is quite worrying as it can affect the validity of the assessment because if it is not handled well it could yield undesired results, irrespective of how much proper preparation has gone into the exercise.

This section looks at the practices that are carried out by Takoradi Technical University after the actual days of examination. In view of this, the study solicited the views of both the staff and the students of the institution. Tables 15 and 16 present the results of the analyses on views of the staff and students of TTU respectively.

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Table 15: Staff's Views on Activities carried out at TTU after Examinations

Practices	N	Mean	Std. Dev.
Collected answer booklets from candidates are kept with lecturers	137	2.36	0.977
Collected answer booklets from candidates are kept with HODs	134	1.99	0.731
Collected answer booklets from candidates are kept with the examination unit	136	2.09	0.755
Collected answer booklets from candidates are kept with examination coordinators	135	2.79	0.811
Lecturers are able to mark examination scripts on time	131	2.97	0.744
There is deadline for submission of scores of candidates to Academic Board for approval	135	3.36	0.579
Examination results are released to students on time	134	2.81	0.815
Lecturers give feedback to students on examinations	134	2.76	0.894
Overall mean	8	2.64	0.788

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49; Strongly agree = 3.5 - 4.0
Source: Field Survey (2018)

With mean values between 1.99 and 2.36 and standard deviations in the magnitude of 0.579 and 0.977, the staff of Takoradi Technical University indicated that the answer booklets collected from candidates were not kept with lecturers, heads of departments (HODs) or the examination unit. "Collected answer booklets from candidates are kept with Examination Coordinators" recorded a mean of 2.79 indicating that the answer scripts or booklets are kept

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with examination coordinators. However, this mean does not greatly differ from the upper limit mean of 2.49 for "disagree". Thus, it can be observed from Table 15 that, on the average, the staff indicated otherwise.

Considering these, Table 15 reveals that TTU does not have structured policy on who keeps the students' answer booklets after they have been collected. Similarly, the views of the staff were divided on the lecturers giving students feedback on their examinations (2.76); and timely releasing students' examination results (2.81). However, the staff indicated that there is a deadline set for the submission of students' examination scores to the academic board for approval (3.36) and so the lecturers mark the examination scripts on time (2.97).

The result of the analysis on the views of the students regarding the activities of Takoradi Technical University after writing examinations is presented in Table 16.

Table 16: Students' Views on Activities carried out at TTU after Examinations

Practices	N	Mean	Std. Dev.
Lecturers are able to mark examination scripts on time	185	2.82	0.793
Examination results are released to students on time	185	2.03	0.932
Lecturers give feedback to students on examinations	185	2.61	0.860
I am satisfy with my examination results	185	2.58	1.040
Overall mean	4	2.51	0.906

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49; Strongly agree = 3.5 - 4.0

Source: Field Survey, Geraldo (2018)

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With an overall mean of 2.51 and a standard deviation of 0.906, there is an indication that the students of Takoradi Technical University slightly agreed that lecturers were able to mark examination scripts on time; their examination results were released on time; lecturers gave them feedback on their examinations; and that they are satisfied with their examination results.

However, since the overall mean value is just a little more than 2.49, it can be deduced that the students had split opinions on the management practices of TTU after an examination had been written. With mean of 2.03, Table 16 shows that the students indicated that their examination results were not released to them on time. Also, with means of 2.61 and 2.58, Table 16 shows that the students indicated that their lecturers gave them feedbacks on their examinations and were satisfied with their examination results. However, since the means are fairly close to 2.49, it shows that, on the average, the students disagreed. On the other hand, with a mean of 2.82, the students indicated that the lecturers are able to mark examination scripts on time.

The results from both respondents indicate that lecturers who were unavailable at the end of the examinations go for their scripts from the examination coordinators for marking which they are able to do as quickly as possible. However, for one reason or the other the students indicated that their results were not released to them on time. This practice can undermine the validity of the final scores as during this period something fishy could happen. Also, this delay could be resulting from the scores being vetted by external moderators to ensure that standards set for an award are appropriate; students' performance standards are comparable with similar programmes in other schools they are familiar with; and the processes for assessing, examining and

determining the awards were sound and fairly conducted (Ibara, 2008; Babatola, n.d.).

Research Question Two: What are the challenges that Takoradi Technical University encounter in managing examinations?

Challenges Encountered in Managing Examinations at TTU

The kind of challenges that Takoradi Technical University encounters in managing its examinations are presented under this section. In view of this, the study solicited the views of both the staff and the students of the institution. Tables 17 and 18 present the results of the analyses on views of the staff and students of TTU respectively.

Table 17: Staff's Views on the Challenges Encountered in Managing Examinations at TTU

Practices	N	Mean	Std. Dev.
There are insufficient personnel at the examination unit	134	2.37	0.838
Personnel at the examination unit are not conversant with their duties	134	2.09	0.799
There is inadequate training for personnel at examination unit	133	2.33	0.859
Time allocated for marking examination scripts is not enough	132	2.37	0.833
Cheating during examination is not punished	134	1.72	0.798
Examination halls are not enough for candidates	134	2.67	0.874
Tables and chairs for examinations are not enough for candidates	130	2.38	0.926
There are no clear rules and regulations regarding the conduct of examinations	126	2.12	0.900
Invigilators do not apply the rules regarding examinations	131	1.81	0.714

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Table 17 Cont'd

There is no proper legal process to punish examination offenders	132	1.72	0.724
Insufficient invigilators during examinations	131	1.96	0.836
Insufficient examination coordinators to oversee to the organisation of examinations	134	1.92	0.814
Insufficient examination personnel such examination officers, invigilators and supervisors	132	1.99	0.796
Examination time tables sometimes indicate wrong venues	134	2.28	0.923
Overall mean	14	2.12	0.831

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49;

Strongly agree = 3.5 - 4.0

Source: Field Survey (2018)

Table 17 shows that between 126 and 134 out of the 145 staff respondents of Takoradi Technical University responded to the questions on the various challenges the institution encounters in managing its examinations. There was an overall mean of 2.12 indicating that the staff of TTU did not see the institution encountering any form of challenge in managing its examinations. However, it can be observed that the staff's view on *examination halls is not enough for candidates* recorded a mean of 2.67. With an approximate mean of 3, this indicates that the staff of TTU acknowledged that there are insufficient examination halls for students to write their examinations. Similarly, with means close to 2.5 which indicate "agreement", it can be seen that the staff of TTU had virtually split opinions on *There are insufficient personnel at the examination unit* (2.37), *There is inadequate training for personnel at examination unit* (2.33), *Time allocated for marking examination*

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scripts is not enough (2.37) and *Tables and chairs for examinations are not enough for candidates* (2.38).

Aside these, the staff's responses for the remaining variables for assessing the challenges encountered in managing examinations at TTU recorded mean values between 1.72 and 2.28. These indicate that the staff did not agree that *examination unit personnel are not conversant with their duties*; *cheating during examination is not punished*; *there are no clear rules and regulations regarding the conduct of examinations*; *invigilators do not enforce the examination rules*; *there is no proper legal process to punish examination offenders*; *there are insufficient invigilators during examinations*; *insufficient examination coordinators to oversee to the organisation of examinations*; and *insufficient examination officers and supervisors.*

Table 18 presents the results of the analyses on the views of the students regarding the challenges that TTU encounters in managing its examinations.

Table 18: Students' Views on the Challenges Encountered in Managing Examinations at TTU

Practices	N	Mean	Std. Dev.
Lecturers treat all students fairly	186	2.63	0.861
There is inadequate infrastructure such as examination halls and tables and chairs	185	2.68	1.053
There is lack of discipline among both students and lecturers	184	2.17	0.880
Students' performances and responsibilities are not encouraged and acknowledged	185	2.45	0.853

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Table 18 Cont'd

There are no proper procedures to punish offenders of examination rules and regulations	185	1.89	0.944
Insufficient examination personnel such as examination officers, invigilators and supervisors	186	2.08	0.885
Students leave examination halls during examination without permission	186	1.81	0.871
Overall mean	7	2.24	0.907

Strongly disagree = 1.0 – 1.49; Disagree = 1.5 – 2.49; Agree = 2.5 – 3.49;
Strongly agree = 3.5 – 4.0
Source: Field Survey (2018)

Table 18 shows that with an overall mean of 2.24 the students of Takoradi Technical University reported that they generally disagree that there are challenges in managing examinations in the school. However, the students of Takoradi Technical University reported that they slightly agree that the lecturers treat all students fairly (2.63) and that there is inadequate infrastructure such as examination halls as well as tables and chairs (2.68).

On the other hand, the students disagreed to the remaining variables on the challenges facing the institution in managing its examinations. Based on the results in Tables 17 and 18, there is indication that examination management at Takoradi Technical University encounters challenges. This was noted by Njue et al. (2014) who indicated that despite the legal framework put in place, examination irregularities have occurred with every release of results in examinations. The results showed that TTU encounter examination management challenges such as lack of fair treatment of students by lecturers and inadequate infrastructure such as examination halls and tables and chairs.

This result buttresses that of Edikpa (2006) who identified lack of providing standard examination halls in schools as a challenge to proper management of examinations.

Research Question Three: How can the examination management challenges of Takoradi Technical University be solved?

Measures to Solve Examination Management Challenges at TTU

The kind of measures that can be put in place to solve the challenges that Takoradi Technical University encounters in managing its examinations are presented under this section. In view of this, the study solicited the views of both the staff and the students of the institution. Tables 19 and 20 present the results of the analyses on views of the staff and students of TTU respectively.

Table 19: Staff's Views on Measures to Solve Examination Management Challenges at TTU

Measure	N	Mean	Std. Dev.
Adequate resources should be given to the Examination Unit to enhance its functions	129	3.33	0.711
Personnel of Examination Unit should be given relevant and frequent training to equip them for effective delivery of their duties	130	3.33	0.675
There should be sufficient examination halls to improve organisation of examinations	130	3.41	0.643
There should be sufficient tables and chairs to improve organisation of examinations	130	3.35	0.703
Timetables for examinations should be prepared bearing in mind the spaces available in TTU	130	3.35	0.679

Table 19 Cont'd

Rules and regulations regarding organisation of examinations should be made known to all stakeholders	130	3.42	0.633
Overall mean	6	3.37	0.674

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49;
Strongly agree = 3.5 - 4.0
Source: Field Survey (2018)

It can be observed from Table 19 that an average of 130 out of the 145 staff of Takoradi Technical University responded to the questionnaire's Section F. With a least and maximum means of 3.33 and 3.42 respectively, and an overall mean of 3.37, the staff of TTU generally agreed that the examination unit should be given adequate resources to enhance its functions; personnel of the examination unit should be given relevant and frequent training to equip them for effective delivery of their duties; there should be sufficient examination halls to improve organisation of examinations; there should be sufficient tables and chairs to improve organisation of examinations; timetables for examinations should be prepared bearing in mind the spaces available in TTU; as well as making known to all stakeholders the rules and regulations regarding the organisation of examinations. With standard deviations in the magnitude of 0.633 and 0.711 connotes that respondents did not differ on measures that could be taken by TTU in order to solve or mitigate the challenges encountered in examination management at TTU.

The result of the analysis on the views of the students regarding the measures that could be taken to solve or mitigate the challenges that Takoradi

Technical University encounters in managing its examinations are presented in Table 20.

Table 20: Students' Views on Measures to Solve Examination Management Challenges at TTU

Measure	N	Mean	Std. Dev.
Adequate resources should be given to the Examination Unit to enhance its functions	183	3.22	0.762
Personnel of Examination Unit should be given relevant and frequent training to equip them for effective delivery of their duties	183	3.28	0.650
There should be sufficient examination halls to improve organisation of examinations	183	3.40	0.629
There should be sufficient tables and chairs to improve organisation of examinations	183	3.40	0.629
Time tables for examinations should be prepared bearing in mind the spaces available in TTU	178	3.28	0.757
Rules and regulations regarding organisation of examinations should be made known to all stakeholders	177	3.37	0.695
Overall mean	6	3.33	0.687

Strongly disagree = 1.0 - 1.49; Disagree = 1.5 - 2.49; Agree = 2.5 - 3.49; Strongly agree = 3.5 - 4.0

Source: Field Survey (2018)

It can be seen from Table 20 that between 177 and 183 out of the 217 student respondents of the Takoradi Technical University responded to the Section F of the questionnaire. The variables of *Personnel of Examination Unit*

should be given relevant and frequent training to equip them for effective delivery of their duties and *Time tables for examinations should be prepared bearing in mind the spaces available in TTU* recorded equal means of 3.28 and standard deviations of 0.650 and 0.757 respectively. This implies that some of the students' responses on *Time tables for examinations should be prepared bearing in mind the spaces available in TTU* differed from "Agree" more than their responses on *Personnel of Examination Unit should be given relevant and frequent training to equip them for effective delivery of their duties*. Despite these, all the variables on measures to solve the examination management challenges at TTU recorded mean values between 3.0 and 3.49. This indicates that students generally agreed that the Examination Unit should be given adequate resources to enhance its functions; personnel of the Examination Unit should be given relevant and frequent training to equip them for effective delivery of their duties; there should be sufficient examination halls to improve organisation of examinations; there should be sufficient tables and chairs to improve organisation of examinations; timetables for examinations should be prepared bearing in mind the spaces available in TTU; as well as make known the rules and regulations regarding the organisation of examinations to all stakeholders.

The results of the analyses from Tables 19 and 20 imply that, on management of examinations at Takoradi Technical University both the staff and students of the institution believe that in the organisation of examinations challenges are bound to occur however appropriate measures could be taken to solve or mitigate them. They indicated that the examinations at TTU can be solved if the examination unit is adequately resourced and its personnel are

frequently trained. They also indicated that having sufficient examination halls and furniture; preparing examination timetables considering the spaces available at TTU; and making known the rules and regulations of the examinations to all stakeholders will improve the examination management processes.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the summary of the findings of the research on management of examinations at Takoradi Technical University, the conclusions drawn from the results and findings. Also presented in this chapter are the recommendations for policy implementation. The summary constitutes the purpose of the study, the research questions which formed the foundations of the study, the research methods employed in conducting the study and a summary of the results. The conclusions drawn from the findings are the deductions derived from the results of the analysis whilst the recommendations bring out possible suggestions to improve practices and policies.

Summary

The purpose of the study was to investigate the current state of practices in managing examinations at Takoradi Technical University with attention on the practices before, during and after examinations. The research questions that the study sought to answer include: What is the current state of examination management in the Takoradi Technical University? What are the challenges that Takoradi Technical University encounter in managing examinations? How can the examination management challenges in Takoradi Technical University be solved? The study was conducted using the descriptive research design on all persons involved in the examination process at Takoradi Technical University. These include the administrators at the various departments and at the examination unit, heads of departments, lecturers, faculty officers and the student body. A sample of 370 respondents which was determined by the

Krejcie and Morgan's table was selected through a combination of the census, purposive and quota sampling techniques. The study adopted the quantitative research design to collect and analyse data and therefore used two self-administered questionnaires, each for the staff and students to gather the data and the resulting data were analysed using descriptive statistics such as percentages, frequencies, means and standard deviations. The study was situated within the conceptual framework on relationship between examination management practices and examination adapted from Ogunji (2011). The conceptual framework outlines the parties involved in the conduct of examination and this includes administrators, students and lecturers. Items needed for the conduct of examinations also include laboratories, equipment, stationery, space and human resource.

Key Findings

The following key findings emerged out of the research questions posed:

1. **What is the current state of examination management at Takoradi Technical University?**

Activities carried out in TTU before examinations

The results from the study indicated that TTU has rules and regulations on the number of candidates per invigilator for an examination; timely provision of examination timetables; students and invigilators reporting to examination halls on time as well as the general behaviours of stakeholders (students and staff) before examinations are contained in the handbooks which are given to students to study. The staff indicated that examination questions were set by the lecturers who handled the courses, the questions were then moderated by external assessors. The moderated questions were kept with the HODs whilst

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the printed questions were kept by examination coordinators because they were given enough logistics to work. The students, on the other hand indicated that the required maintenance works on examination halls as well as the setting up of the examination halls were carried out before the commencement of examinations.

Activities carried out at TTU during examinations

The respondents indicated that during examinations, students comported themselves and they were treated fairly by invigilators, given adequate time to answer the various examination questions and the sitting arrangement were well-spaced out according to the rules and regulations. In addition to this, the students were provided adequate question papers and answer booklets during examinations. They also indicated that the examination halls were well illuminated with good ventilation during examinations. It was also indicated that examination taskforce members were enough to effectively carry out their duties during the period.

Activities carried out after examinations in TTU

The results of the analysis indicated that the lecturers were able to mark the students' examination scripts on time and feedback were also given to the students to know their performances. Furthermore, the staff indicated that answer booklets are collected after examination were kept with the examination coordinators before they were given to the lecturers who were given a deadline for submitting candidates' scores to the Academic Board for approval. Thus, the examination results of students were released to them on time. The students also indicated that they were satisfied with their examination results though they were not released to them on time.

2. **What are the challenges that Takoradi Technical University encounter in managing examinations at TTU?**

Both the staff and the students indicated that infrastructure such as examination halls and furniture for writing the examinations were inadequate. The students further indicated that they were all not treated fairly by their lecturers during examinations.

3. **How can the examination management challenges of Takoradi Technical University be solved?**

The results indicated that the examination unit should be adequately resourced and its personnel be trained frequently to equip them for effective delivery of their duties. They also indicated that sufficient examination halls and furniture should be provided to solve the examination management challenges as well as prepare examination timetables considering the spaces available at TTU. Furthermore, the respondents suggested that the examinations rules and regulations should be made known to all students and staff.

Conclusion

Based on the findings of the study, the following conclusions are made on the current state of examination management practices – before, during and after examinations at the Takoradi Technical University:

Regarding the challenges facing TTU in managing its examinations, it was found that the institution virtually had no problem. This is due to the fact that apart from the examination halls and furniture for writing the examinations being inadequate and some students not treated fairly by their lecturers, there was no significant challenge encountered. Finally, on measures to solve examination management challenges, it can be concluded that though TTU

virtually did not encounter challenges in managing its examinations, there is still room for improvement in the areas of infrastructure and education of staff directly involve in examination management.

Recommendations

Based on the findings and conclusions drawn from the results of the study, the following recommendations are made:

1. The examination unit of the institution should be adequately provided with the required resources. The resources that are required to conduct examination include answer booklets, computers, printers, twine, vehicle to convey answer booklets and question papers to and from the examination halls before and after examinations respectively. The provision of the vehicle for examinations will ensure that questions papers and answer booklets arrive at the examination centres to prevent late start of examination. Adequate provision of examination materials as mentioned above would also help ensure the sanity of examination.

2. The staff of the examination unit of the institution should be regularly trained on the current issues affecting the management of examinations. This will help them prepare for challenges in advance and equip themselves to handle such challenges effectively.

3. The authorities of the institution together with stakeholders such as the government should do well to sufficiently provide the necessary infrastructure such as examination halls and furniture to improve the organisation of examinations. Adequate provision of examination halls to ensure that the students are not crowded up in one room which does

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not promote independent work but rather promote examination malpractice.

4. The institution's rules and regulations regarding how its examinations are conducted as well as the expected behaviour of those involved in the examinations should be made known to all the appropriate stakeholders. Rules and regulations governing examinations should be pasted at the various examination centres, halls of residence and departmental notice boards to inform students of what they are required to know before, during and after examinations. Punishments that are meted for examination malpractices should be strictly adhered to and implemented to deter students, lecturers and invigilators from engaging in any practice that does not sanitise the conduct of examinations.

Areas for Future Study

This current study has identified some areas for future study. First and foremost, future research can look at students' perception and examination practices in TTU. This research will unearth certain problems and current practices in examination conduct in TTU and how students could help to come up with solutions to solve these problems. Also, two or more technical universities could be considered for study under this research topic to be able to have a true representation of the results and also allow for comparison and suggested solutions to improve examinations which are the heartbeat of every academic institution.

Again, the research revealed that students are scored or graded after examination even though the methodology and procedure or mode of assessment before, during and after examinations are not made known to these

students. In view of this, future research could be conducted into examinations conduct and mode of assessment in technical universities.

This current study has also revealed that there are multiples of partners which include students, administrators, lecturers and invigilators involved in the conduct of examination. In view of this, future research could be conducted into roles and responsibilities of partners in the conduct of examinations. This will add to literature on the expectation of each of these partners and stakeholders involved in examination to attain a sanitised examination conduct.

Finally, since gender issues have gained prominence in educational administration, future study could consider gender perception of examination conduct in technical universities.

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APPENDICES

APPENDIX A

UNIVERSITY

UNIVERSITY OF CAPE COAST

INSTITUTE FOR EDUCATIONAL PLANNING AND

ADMINISTRATION

QUESTIONNAIRE ON EXAMINATION MANAGEMENT

PRACTICES IN TAKORADI TECHNICAL UNIVERSITY

This questionnaire is designed to gather information on the examination management practices in your institution. Thus, your participation is essential to the success of the study and you are assured that any information you provide will be kept confidential.

Please respond to the items on the questionnaire by ticking [√] or writing where appropriate.

<u>Section A: Background/Demographic Data</u>

1. Gender: i. Male [ ]   ii. Female [ ]

2. Academic Department: i. Graphics [ ] ii. Textiles [ ] iii. Fashion   [ ]

   iv. Painting [ ] v. Ceramics [ ] vi. Sculpture [ ] vii. Accounting [ ]   viii.

   Marketing [ ] ix. Purchasing   [ ] x. Secretaryship [ ] xi. Tourism [ ] xii.

   Interior design [ ] xiii. Computer [ ] xiv. Science [ ] xv. HCIM [ ] xvi.

   Civil [ ] xvii. Mechanical [ ] xviii. Electrical [ ]xix. Construction [ ]xx.

   Mathematics & Statistics [ ]xxi. Estate [ ]

3. How long have you been working with TTU? ……………………………

4. Designation (position occupying): …………………………………………

Section B: Examination Management Practices before Examinations

Please respond to the following pre-practices regarding examination management at TTU:

Statement	Strongly disagree	Disagree	Agree	Strongly
5. There are rules and regulations regarding conduct of examinations at TTU.				
6. Examination questions are set by lecturers who handle the courses.				
7. Examination questions are moderated by internal assessors.				
8. Examination questions are moderated by external assessors.				
9. Moderated questions are kept in the custody of lecturers.				
10. Moderated questions are kept in the custody of HODs				
11. Moderated questions are kept in the custody of Exams unit of TTU.				
12. Examination questions are printed by lecturers.				
13. Examination questions are printed by HODs.				
14. Examination questions are printed by Exams unit of TTU.				

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15. Examination questions are printed by Examination Coordinators.				
16. Examination coordinators have enough logistics to work with.				
17. Printed Examination questions are in the custody of lecturers.				
18. Printed Examination questions are kept in the custody of HODs				
19. Printed Examination questions are kept in the custody of Exams unit of TTU.				
20. Printed examination questions are kept in the custody of examination coordinators.				
21.There are rules and regulations regarding the conduct of invigilators and exam officers of TTU.				
22. There are rules and regulations regarding the number of candidates per invigilator during examinations.				
23. Candidates are given handbooks on the rules and regulations regarding the conduct of examinations.				
24. Candidates are familiar with the rules and regulations regarding the conduct of examinations.				

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25. Examination time tables are timely provided.				
26. Invigilators and students report to examination halls on time.				

27. Briefly describe activities carried out before examinations at TTU.

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Section C: Examination Management Practices during Examinations

Please respond to the following statements regarding management practices during examinations at TTU:

Statement	Strongly disagree	Disagree	Agree	Strongly
28. Examination halls/rooms are well lighted during examinations.				
29. Examination halls are well ventilated during examinations.				
30. There rules and regulations regarding spacing among candidates during examinations.				
31. Adequate question papers and answer booklets needed for examinations are provided.				

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32. There is adequate time allocated to the various examination questions.				
33. Invigilators are fair to every student during examinations.				
34. Students comport themselves well during examinations.				
35. There are enough members in the examination taskforce to carry out their duties effectively.				

36. Briefly describe activities carried out during examinations at TTU.

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Section D: Management Practices after Examinations

Please respond to the following statements regarding management practices after examinations:

Statement	Strongly disagree	Disagree	Agree	Strongly
37. Collected answer booklets from students/candidates are kept with lecturers.				
38. Collected answer booklets from students/candidates are kept with HODs.				

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39. Collected answer booklets from students/candidates are kept with Exams Unit.				
40. Collected answer booklets from students/candidates are kept with Examination Coordinators.				
41. Lecturers are able to mark examination scripts on time.				
42. There is deadline for submission of scores of candidates (students) to Academic Board for approval.				
43. Examination results are released to students on time.				
44. Lecturers give feedback to students on examinations.				

45. Briefly describe the activities carried out in TTU after examinations.

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Section E: Challenges Faced in Managing Examination

Please respond to the statements regarding the challenges that TTU encounters in its examinations.

Statement	Strongly disagree	Disagree	Agree	Strongly
46. There are insufficient personnel at the Examination Unit.				
47. Personnel at the Examination Unit are not conversant with their duties.				
48. There is inadequate training for personnel at Examination Unit.				
49. Time allocated for marking examination scripts is not enough.				
50. Cheating during examination is not punished.				
51. Examination halls are not enough for candidates.				
52. Tables and chairs for examinations are not enough for candidates.				
53. There are no clear rules and regulations regarding the conduct of examinations.				
54. Invigilators do not apply the rules regarding examinations.				
55. There is no proper legal process to punish examination offenders.				
56. Insufficient invigilators during examinations.				

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57. Insufficient examination coordinators to oversee to the organisation of examinations.				
58. Insufficient examination personnel such examination officers, invigilators and supervisors				
59. Examination time tables sometimes indicate wrong venues.				

60. Briefly state other examination challenges of your university.

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Section E: Measures to Improve the Examination Management Practices

Kindly indicate measures that can be put in place by the authorities of TTU to improve the institution's examination management practices.

Statement	Strongly disagree	Disagree	Agree	Strongly
61. Adequate resources should be given to the Examination Unit to enhance its functions.				
62. Personnel of Examination Unit should be given relevant and frequent training to equip them for effective delivery of their duties.				
63. There should be sufficient examination halls to improve organisation of examinations.				

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64. There should be sufficient tables and chairs to improve organisation of examinations.				
65. Time tables for examinations should be prepared bearing in mind the spaces available in TTU.				
66. Rules and regulations regarding organisation of examinations should be made known to all stakeholders.				

67. Briefly state measures that would improve the organisation of examinations in TTU.

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APPENDIX B

QUESTIONNAIRE FOR THE STUDENTS OF TAKORADI

TECHNICAL UNIVERSITY

QUESTIONNAIRE ON EXAMINATION MANAGEMENT

PRACTICES IN TAKORADI TECHNICAL UNIVERSITY

This questionnaire is designed to gather information on the examination management practices in your institution. Thus, your participation is essential to the success of the study and you are assured that any information you provide will be kept confidential.

Please respond to the items on the questionnaire by ticking [√] or writing where appropriate.

<u>**Section A: Background/Demographic Data**</u>

1. Gender: i. Male [ ]   ii. Female [ ]

2. Academic Department:

   i. Graphics [ ]ii. Textiles [ ] iii. Fashion   [ ]iv. Painting [ ]v. Ceramics [ ]vi. Sculpture [ ] vii. Accounting [ ] viii. Marketing [ ] ix. Purchasing [ ]x. Secretaryship [ ]xi. Tourism [ ]xii. Interior design [ ] xiii. Computer [ ] xiv. Science [ ] xv. HCIM [ ] xvi. Civil [ ] xvii. Mechanical [ ]xviii. Electrical [ ]   xix. Construction [ ]   xx. Mathematics & Statistics [ ]xxi. Estate [ ]

3. In which academic year are you? i. Year II [ ]   ii. Year III [ ]

4. How many times have you written examinations in Takoradi Technical University? i. Twice [ ] ii. Thrice [ ] iii. Four [ ] iv. Five [ ]

v. Others (specify) ……………

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Section B: Examination Management Practices before Examinations

Please respond to the following statements regarding management practices at

TTU before examinations:

Statement	Strongly disagree	Disagree	Agree	Strongly
5. Candidates are given handbooks on the rules and regulations regarding the conduct of examinations.				
6. Candidates are familiar with the rules and regulations regarding the conduct of examinations.				
7. There are rules and regulations regarding conduct of examinations in TTU				
8.There are rules and regulations regarding the conduct of invigilators and exam officers of TTU.				
9. There are rules and regulations regarding the number of candidates per invigilator during examinations.				
10. There are rules and regulations regarding spacing among candidates during examinations.				
11. Examination time tables are timely provided.				
12. Invigilators and students report to examination halls on time.				
13. Candidates are given handbooks on the rules and regulations regarding the conduct of examinations.				
14. Candidates are familiar with the rules and regulations regarding the conduct of examinations.				

15. Examination halls are well lighted during examinations				
16. Examination halls are well ventilated during examinations.				

17. Briefly describe the activities carried out in TTU before examinations.

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Section C: Examination Management Practices during Examinations

Please respond to the following statements regarding management practices at

TTU during examinations:

Statement	Strongly disagree	Disagree	Agree	Strongly
18. There is adequate time allocated to the various examination questions.				
19. Invigilators are fair to every student during examinations.				
20. Examination halls are well lighted during examinations				
21. Examination halls are well ventilated during examinations.				
22. There rules and regulations regarding spacing among candidates during examinations.				

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23. Adequate question papers and answer booklets needed during examinations are provided.				
24. There is adequate time allocated to the various examination questions.				
25. Students comport themselves well during examinations.				
26. There are enough members in the examination taskforce to carry out their duties effectively.				

27. Briefly describe the activities carried out in TTU during examinations.

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Section D: Examination Management Practices after Examinations

Please respond to the following statements regarding management practices after examinations:

Statement	Strongly disagree	Disagree	Agree	Strongly
28. Lecturers are able to mark examination scripts on time.				
29. Examination results are released to students on time.				
30. Lecturers give feedback to students on examinations.				

31. I am satisfy with my examination results.				

32. Briefly describe the activities carried out in TTU after examinations.

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Section E: Challenges Faced in Managing Examinations

Please indicate the kinds of challenges that TTU encounters in its examination

management.

Statement	Strongly disagree	Disagree	Agree	Strongly
34. Lecturers treat all students fairly				
35. There is inadequate infrastructure such as examination halls and tables and chairs.				
36. There is lack of discipline among both students and lecturers.				
37. Students' performances and responsibilities are not encouraged and acknowledged.				
38. There are no proper procedures to punish offenders of examination rules and regulations.				
39. Insufficient examination personnel such examination officers, invigilators and supervisors.				
40. Students leave examination halls during examination without permission.				

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41. Any other examination challenges please specify.

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Section F: Measures to Improve the Examinations Management Practices

Kindly indicate the measures that can be put in place by the authorities of TTU

to improve the institution's examination management practices.

Statement	Strongly disagree	Disagree	Agree	Strongly
42. Adequate resources should be given to the Examination Unit to enhance its functions.				
43. Personnel of Examination Unit should be given relevant and frequent training to equip them for effective delivery of their duties.				
44. There should be sufficient examination halls, and tables and chairs to improve organisation of examinations.				
45. Time tables for examinations should be prepared bearing in mind the spaces available in TTU.				
46. Rules and regulations regarding organisation of examinations should be made known to all stakeholders.				

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47. Any other measures to improve conduct of examination, please specify.

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APPENDIX C

CALCULATION OF SAMPLE SIZE

N	S	N	S	N	S	N	S	N	S
10	10	110	86	300	169	950	274	4,500	354
15	14	120	92	320	175	1,000	278	5,000	357
20	19	130	97	340	181	1,100	285	6,000	361
25	24	140	103	360	186	1,200	291	7,000	364
30	28	150	108	380	191	1,300	297	8,000	367
35	32	160	113	400	196	1,400	302	9,000	368
40	36	170	118	420	201	1,500	306	10,000	370
45	40	180	123	440	205	1,600	310	15,000	375
50	44	190	127	460	210	1,700	313	20,000	377
55	48	200	132	480	214	1,800	317	30,000	379
60	52	210	136	500	217	1,900	320	40,000	380
65	56	220	140	550	226	2,000	322	50,000	381
70	59	230	144	600	234	2,200	327	75,000	382
75	63	240	148	650	242	2,400	331	100,0000	384
80	66	250	152	700	248	2,600	335		
85	70	260	155	750	254	2,800	338		
90	73	270	159	800	260	3,000	341		
95	76	280	162	850	265	3,500	346		
100	80	290	165	900	269	4,000	351		

Source: Krejcie & Morgan (1970)

APPENDIX D

PRE-TEST RESULTS

Reliability Tests of the Data Collection Instruments

		Respondents		
		Staff		Students
Part of Instruments	N	Cronbach's Alpha	N	Cronbach's Alpha
Section B	22	0.754	11	0.840
Section C	8	0.786	8	0.852
Section D	8	0.503	4	0.675
Section E	14	0.725	7	0.736
Section F	6	0.902	6	0.899
Overall	58	0.725	36	0.863

Source: Field Survey (2018)