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Business Research Supervision in Institutions of Higher Learning: A Case Study of Some Selected Technical Universities in Ghana

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ABSTRACT

The study examines the shape of business research supervision in institutions of higher learning. The study was based on the sensitivity that the quality of business research supervision in Ghanaian Technical Universities is abating as less attention seem to be paid to such academic exercise by these institutions. The study was guided by the interpretive theory of social constructivism. Document analysis, archival contents and interview techniques were used to explore the perceptions of 45 participants and 120 archival contents (supervised and approved bounded project reports) on the state of business research supervision. Four set of issues including; (a) definition of research supervision, (b) existence of institution-wide research supervision policy and procedures, (c) availability of resource for research supervision exercise and (d) the extent of influence of quality assurance directorates on research supervision steered the study. Respondents had a more traditional and limited definition and understanding of research supervision. There was absence of institution-wide policies to govern project work undertaking and supervision. Although departments admitted having personalised research supervision policies, they were not overtly communicated to both students and supervisors. Project supervision exercise was also inadequately resourced: a demotivation for supervisors. Quality assurance policies did not cover project work supervision. Per the framework used in the study, the problems identified above accounted for poor quality supervision and had a rippled negative implication on research outcomes. Among others, the study recommended the development of institution-wide policies that clearly defines and communicates responsibilities of supervisors and students as well as supervision expectations. Supervision exercise should be well-resourced (financial, material, human, information

and processes), this will help motivate supervisors and students to tackle the exercise with utmost seriousness. Quality assurance policies must be broadened to include all aspects - pre and post project work supervision phases. This is the only way ethical standards and integrity can be built into the supervision process. If the above recommendations are put into perspective, it is believed that quality supervision can be assured and consequently research outcomes will be improved.

Keywords: Business, Research, Supervision, Technical University, Ghana

1. INTRODUCTION

The business environment is fast paced and contributes enormously to the growth and development of economies. According to the CEO of Women's World Banking Ghana, small and medium scale businesses contribute an estimated 70% of Ghana's GDP and 92% of businesses in Ghana making it a pinnacle on which economies of nations thrive. With economies now being driven by knowledge-intensive activities rather than capital-intensive activities, the need to encourage quality business and management research results from students and graduates of educational institutions who are acclaimed future business leaders cannot be overemphasized. To this end, academic research project (ARP) has become a prerequisite for the award of various degrees ranging from Higher National Diploma (HND), Bachelor (Bsc, Btech), and Master (MBA, Mres, Mphil, Msc, Mtech), PhD and so on to students from institutions of higher learning.

The implication of this is that students who are not able to satisfy the requirements for ARP by the end of their study duration are not conferred a degree. To instill compliance to this requirement and also ensure students take the exercise serious, most if not all institutions assign the greatest number of credit hours to the research work. A preliminary investigation shows that ARP cuts across various disciplines of study including Business Management, Applied Science, Engineering, Built and Environmental Technology and so on and some institutions refer it as a long essay. This study was focused on the business faculties of selected technical universities in Ghana, namely; Koforidua Technical University (KTU), Accra Technical University (ATU) and Kumasi Technical University (K'si TU). Business education in Ghana Technical Universities (TUs) comprises of programmes such as Business Studies, Procurement and Supply Chain Management, Logistics, Accountancy, Marketing, Secretaryship and Management Studies, Tourism Management, International Business Management, and so on. Students are usually assigned with a supervisor whose role is to guide the students from cradle to grave of conducting ARP.

The supervisors are expected to guide students in choosing a relevant research topic based on students subject of interest and guide the students throughout the various phases of the project by making sound suggestions and constructive criticism of students' interim project reports. It appears however, that the success of the project work is dwindling over the years. This is reflected in the quality of research results produced by students as well as the skill gap that exists in industries.

Following the advancement and upgrade of polytechnics into TUs, there have become increasing pressures to improve the way project works are conducted. The logic for the noteworthiness of improving research supervision programs in IHL in Ghana is realistically incontrovertible. Factually, it is momentous to emphasize that the swiftness with which Ghana

and for that matter the world is advancing could somewhat be ascribed to the enormous ARP through knowledgeable results of students' project. Academic research works have led to several inventions that have continued to benefit the world at large. Notable among these inventions include; the World Wide Web (WWW) invented by Tim Berners-Lee, a British scientist at CERN. Also, the recent launch of space satellite by some students of All Nations University, Ghana, the development of business and management theories such as theories of need (Abraham Maslow, Alderfer, McGregor and so on), the Porters 5-forces model, Peter Kraljic Model, Supplier Perception Model, the 7's Model developed by McKinsey and many more are products of this development.

Highlighting on the relevance of research work, Stone (2014) emphasized that academic research helps to improve students understanding on a subject, equip students with the practical experience in their area of study, and allows them the opportunity to showcase their skills. In some higher learning institutions (HLIs), ARP is done in groups of 2 to 5 students. This gives students the opportunity to learn about team work, improve on their communication skills and understand their roles and responsibilities as far as working with the team is concerned. In addition, Ab-Rahman et al (2011) notes that scientific writing is an important criterion for benchmarking the quality (in terms of skill, proficiency and know-how) of not only graduates but researchers in general. Good supervision comes to play in ensuring the success of this capability. This study will contribute to raising awareness on the need for HLIs particularly the TUs in Ghana to adopt supervisions models and put in place systems and measures targeted at ensuring that business research undertaking and supervision meets a commonly accepted quality standards.

2. PROBLEM STATEMENT

It is practicably not possible to achieve first-rate research outcomes in the absence of prudential and professional supervision (Abiddin et al, 2011). About five (5) polytechnics in Ghana have attained a Technical University (TU) status. The attainment of a university status by these polytechnics was not on a smooth ground. There were several agitations by academicians, educationists, researchers and policy makers on the conversion process. One of the reasons given by these activists against the conversion was the lack of adequate research by these polytechnics (now TUs). Notwithstanding the efforts made by these institutions in the attainment of a TU status, not much have been done to improve research work, especially, the way project works are being conducted and supervised in the business schools and faculties of these institutions. This is evidenced by several paucities that can be found in final reports submitted by contemporary business students of current dispensation to their various faculties and libraries (*result of a preliminary observation made by the author*). Some of which include plagiarism, typographical errors, inconsistencies of all manners in areas such as font, font size, spacing, paragraphing, headings, sub-headings and referencing.

Project reports display generally poor writing skills by students. It is not surprise that industry players and recruiters complain about lack of work-based problem solving skills among fresh graduates which is a leading cause of skill gap in industries today. This possibly could be attributed to deficits in research supervision in HLIs. A study by Donald et al. (1995) highlighted that IHL are conceptually ambiguous in defining (goals, objectives and expectations) research supervision.

Thus, whilst some academic faction conceptualises research supervision (RS) as a developmental process of assisting the student become a member of a research team and by extension, an associate of a scientific discipline, others constrict the theory of supervision as setting time limit for completion of course work and research projects. Lessing and Lessing (2004) notes that HLIs have made minute advancement in establishing a comprehensive research policies and procedures that cuts across universities' disciplines. This, according to Lovitts (2005) has made it difficult to understand and guide students through developmental phases. Analysing effective supervisory approach in enhancing graduate research studies, Abidden et al. (2011) questionably alleged that resourcing supervision exercise continues to be a hurdle in most HLIs.

Though this might be true, there could be exceptions. Furthermore, most institutions have established quality assurance (QA) divisions to provide support, guide and monitor, inspect, evaluate and report on the academic processes. However, it appears that the Quality Assurance units (QAUs) of TUs in Ghana particularly, have been limited in scope as they continue to be dormant as far as certain functions are concerned in HLIs (Okae-Adjei, 2016). Supervision of research work is no exception. Besides, there seems to be substantially lack of empirical study on the state of business research undertaking and supervision in TUs in Ghana. Records of what has been written about business RS appear in the popular press and university handbooks and remain essentially uncharted in the academic literature. Compared to public universities, it can be said that the ARP supervision is at its embryonic stage and marred with numerous challenges. The study descriptively explores business RS issues in three TUs in Ghana, particularly, understanding institutions definition of supervision, existence of research policies, availability of resources for supervision exercise, the involvement of QAUs in supervision exercise and how these factors affects quality supervision (QS) and research outcomes.

3. SUPERVISION DRIVERS

3. 1. Definition of Supervision

Supervision is extensively acknowledged as a complex and multifaceted exercise. The act of supervising is frequently used to mean research supervision, social work supervision, counselling and on-the-site supervision. Earlier researchers have functionalise supervision in different ways. Nonetheless, the true nature of supervision continues to be masked with ambiguities making it difficult to clearly define. A clear definition of supervision in terms roles and responsibilities, policies and procedures, objectives and goals as well as expectations is paramount to ensuring quality research outcomes (Donald et al. 1995; Abiddin et al. 2011). In an effort to define supervision, RS was described in terms of support from a supervisor which is expected to result in the production of research of the utmost quality (University of Sydney Business School Post Graduate Handbook, 2017).

The guide further expatiated on the definition of supervision to include three different aspects. First, providing advice to a research student in a discipline and assisting to determine the trajectory of the research. Secondly, setting timetables/deadlines and thoroughly monitoring student's development and finally, providing the student with feedback on performances and progress, inspiring the student through words of encouragement and providing needed support for improvement. The Research Degree Supervisors Handbook, University of Kent (2017)

suggests that the definition of research supervision is vague when looked at only from the angle of the supervisor.

The handbook therefore defined research supervision by advancing some 21 roles to be played by the main supervisor and 21 roles to be played by the research student (pg 3-4). It concluded by elucidating that supervisory responsibility should be shared among the supervisory team with the consent of the student on how the responsibilities are to be performed. Abiddin et al. (2011) takes the standpoint that varied independent factors such as social setting, traits of both supervisor and student, skill of the supervisor and relationship orientation of both supervisor and student makes supervision a complicated process and particularly problematic to provide common supervision guidance. As a result, the recommendation provided by Abiddin et al. (2011) concentrated on the mechanism as well as relevant inputs in the supervision process as do other authors and research handbooks. Recent efforts to theorize students' supervision in institutions of higher learning have rather highlighted on relational functions of supervisors in addition to their supporting and role exemplary approach towards supervision (Donald et al. 1995; Jacobi, 1991; Ives & Rowley, 2005).

This suggests that even though proficiency in a field of study and ones previous and present experience in research are fundamental for a supervisor, they do not assure best supervisory procedure. While student expect that their supervisor possess the requisite skills and competence in a related field to supervise their work, they also expect the supervisors to provide the needed guide, support, attention and positive criticism of their work and also create a welcoming ambiance for students. Abiddin et al. (2011) believes that supervision should be concentrated and thorough, and anchored on face-to-face relationship between the supervisor and the student.

3. 2. Supervision Policies

Research supervision policies play a vital role in ensuring QS and quality research outcomes. Supervisors need policies and procedures to execute their duties appropriately. According to Sheridan and Pyke (1994) research supervision policies is premeditated to impact supervisor's decision and engagements and all supervisory roles and undertakings occurs in the boundary set by it. Universities' research supervision policies and procedures establish guidelines of conduct as far as research supervision are concerned, delineating the responsibilities of both the supervisor and students. According to (Donald et al. 1995) depending on the institutional research need and impact factor, policies and procedures for conducting and supervising research are established to guide both the supervisor and student's conducts and other areas relevant to the supervision process. In most cases policies on academic RS are documented in academic handbooks of HLIs with utmost concerns focused on ensuring students graduate within a reasonable time. Studies have shown that universities' general policies on research supervision are often "tongue-tied" by individual departments and disciplines that retain the authority to effectuate these policies (Humphrey and McCarthey, 1999). Universities' disciplines device their own research supervision policies tailored to meet specific departmental needs. However, these policies should not contradict the institutions overall research supervision policies (Sheridan and Pyke, 1994).

Donald et al. (1995) opined that certain institutions do not have comprehensive university policies for research supervision. This automatically confers authority to departments to device their own policies on RS. Policies made on silo may not be comprehensive enough to meet overall goal of an institution

3. 3. Resource Availability for Research Supervision

Studies have shown that resource availability is a major challenge in ensuring adequate supervision of research in HLIs (Askew et al. 2016). While educational institutional workers are recognized at the end of year for their immense contribution to the institution's progress, studies has proven that recognition related to QS is rarely seen in the lineup of awards to be issued. In a study by Askew et al. (2016) supervisors admitted they were not motivated to take on more supervisory workload because there was no incentive for doing so. As part of resource availability, Leder (1995) opined that an associated facilitating factor to the quality of RS which has received subtle attention is supervisor/student ratio. It is rare to find policies backing formally established limits on supervisor load (supervisor student ratio) in Universities in Ghana and even other parts of world. However, studies has shown that some Canadian universities as a matter of policy have a maximum student/supervisor ratio of $<$ or $=$ 6:1. According to the Higher Degree Research Supervision and Resources Policy, University of

Wollogong Australia (2019), supervisory loads are subject to limit. While professors and associate professors of the above mentioned institution were assigned with higher supervisory loads (15:1), other academic staffs had lower supervisory loads (10:1). This suggests that supervisory load policy of the institution was dependent on academic staff's qualification and possibly associated responsibility loads. According to Ives and Rowley (2005) HLIs take into consideration a number of factors in determining supervisory load. These include the status of the academic staff, availability, workload (teaching, research, administrative responsibilities and so on), past supervision performance, the level of research student and many more. Whilst there continues to be agitation over the appropriate supervisory load on an academic staff, Donald et al. (1995) recommended that an optimal student/supervisor ratio should be one that supports quality research supervision and fosters timely completion of research work.

3. 4. Quality Assurance in Research Supervision

The current trend for higher educational institutions over the past decade has been a collective emphasis on integrating quality policies into all areas of academic operations. Academic RS is no exception. Gathering from Shah et al (2011), QA is an organized management and evaluation techniques implemented by educational institutions and arrangements to monitor performance alongside set objectives and to guarantee achievements of quality outcomes and quality improvements. According to Cryer and Mertens (2003), HLIs have not taken the assurance of quality in their research supervision process serious.

This, according to Wadesango and Machingambi (2011) accounts for the increasing number of students who don't finish their project work before deadline, lack of confidence during defense of project and generally low quality research outcomes. Kam (1997) believes that QA is the best means to ensure that desirable results are achieved and also means of enhancing reputation of university, faculty, supervisor and the research student. Given the above benefits of QA in HLIs, it presupposes that implementing QA policies to cover project work supervision will assure the achievement of quality as well as facilitate improvement in the supervision process. Markedly, reporting on the idiosyncrasies and malfunctioning of supervisors, Colebatch (2002) stressed that QA in research supervision is a twofold approach implying that quality should be assured by both the supervisor and the student. According to The Research Degree Supervisors Handbook, University of Kent (2017), it is the responsibility

of the main supervisor to remain conversant with and appreciate the requirements of the code of conduct for QA for research programmes.

Relating this responsibility to the take of Colebatch (2002) about QA being a two-way approach, it can be said that it is also the responsibility of the student to be up-to-date with and understand the requirements for the code of practice for QA for research programme of studies. From the review above, it justifies to settle that good supervision is fulcrum around a clear definition of supervision- goals and expectations, availability of research policies (institutional or departmental), availability of resources and assurance of quality in the process. It is worth noting that all these positivity about research supervision are not possible without a well-defined and concerted supervision expectation. When these influencing factors are put in place, quality in supervision could be assured as depicted in literature.

4. QUALITY SUPERVISION

Quality Supervision according to Lee (2008) is a supervision modelled around some tangled qualities management, enculturation, critical thinking, emancipation and relationship management. As stated earlier, QA is the best means to ensure that desirable results are achieved. Desirable results in a given project can be defined as the ability of the student to finish his project as scheduled, achieve project work objectives, enrich institutions library with novel project work based on quality evidence, impact the academic community positively, fit for the job market and affect industry performance. The means through which these desirable results can be achieved is QS. QS from the functional model is seen as the ability of supervisor to professionally manage the entire project of supervising which includes; applying laid down policies, processes and procedures, approaches, knowledge, skills and experience to achieve project objectives.

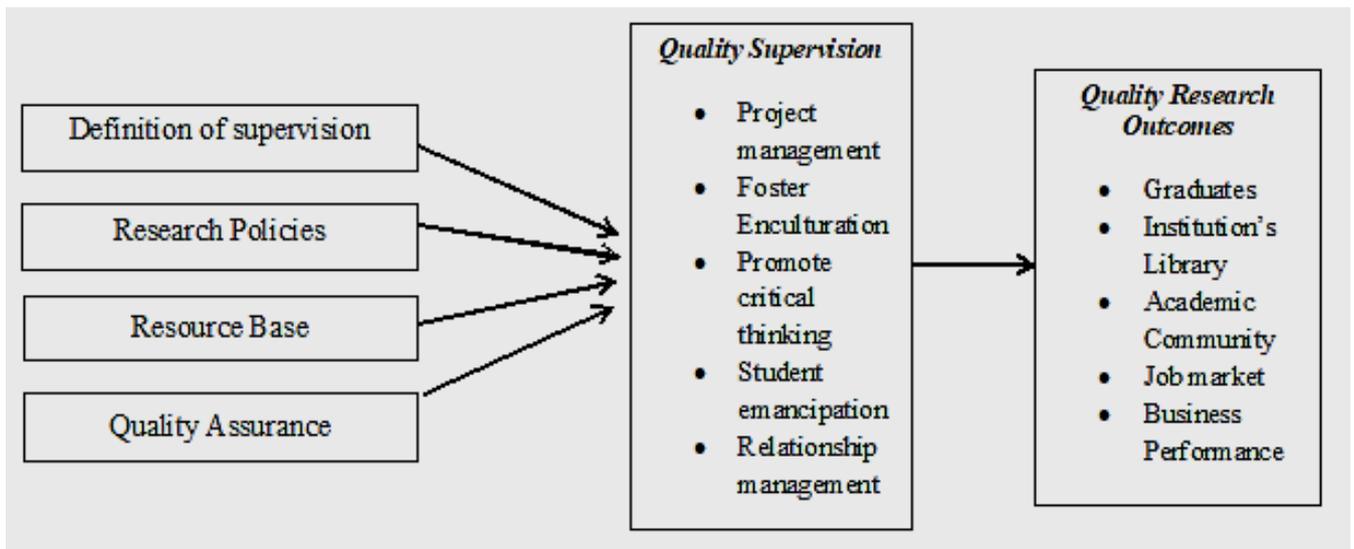
This approach makes students more submissive and organized in the conduct of their research and consequently yield expected research outcomes. According to Taylor (2014) a motivated supervisor ideally would initiate (define research outputs with student and set ground rules), engage student in planning (define various research tasks to be covered and set time schedules and explain dependencies), execute plans (direct students to do the actual project), monitor and measure students' performance in line with planned and close project. QS, from the enculturation model refers to the supervisor's ability to support students to become an affiliate of the academic community. Supervisors in this case, perform a role as family doctors (Lee, 2008) or gatekeepers (Wisker, 2005, pg 202) by countering political, social (Pearson and Brew, 2001), cultural, economic, technical and environmental beliefs of students which does not correlate with beliefs of the research community as a way of enculturating students to become associates of the research fraternity.

QS, from the critical thinking model is the ability of a supervisor to apply the Socratic and catechistic techniques to make their students move out of dogmatism to becoming more of provisional thinkers. Critical thinking is a hard skill expected of every business student and research is expected to indoctrinate students with the critical thinking skills. With this model, research students are keenly and skillfully able to conceptualize, apply, analyse, synthesis, examine information to draw a conclusion. Similar to Lee (2008), the critical thinking model works based on three phases; problematizing, finding relations and networks, and discovering conceptions. This is a hard skill that remains with students and serves as a lifetime resource that

can be applied anytime, anywhere and in different situations. QS, from the emancipation model is the ability of a supervisor to mentor, support, constructively criticize, encourage and appreciate students' effort with emphasis on making a student become an independent researcher. QS from a relationship management model refers to the ability of the supervisor to exhibit exemplary leadership styles and emotional intelligence (EQ) skills necessary to promote successful completion of the research work (Kam, 1997). Studies have proven that poor relational approach adopted by supervisor ends up with students not completing their research as scheduled (Spiller et al 2013). Correspondingly, Zhao (2003) notes that present relationship of students with their supervisor determines the way students will relate with their own students in the future although there may be exceptions to this. In general, it is imperative to count that the pace at which economies of nations is moving towards a knowledge-based economy merits that supervisors and higher educational and scientific institutions improve on their research work supervision and conduct.

QS as used in this study is based on the assumption that when supervision is clearly defined, research policies are put in place, research is well resourced and quality is assured, supervisors in turn employ various techniques and abilities that manage the students through the project by way of enculturating students, promoting their critical thinking ability, making students self-dependent and appropriate relationship management.

5. RESEARCH OUTCOMES



Source: Author's Construct, 2019

Supervision is an important aspect of the development of a neophyte researcher. With increased academic accountability, Thompson et al (2005) notes that good supervision has become an integral component of quality research governance framework and resourced as such. Good supervision provides both researchers and supervisors with important skills in researching and facilitates reframing skills that Grant et al (2014) admitted was relevant for present-day fast marched world. RS can play a vital role in enabling students to fulfil their potential. Depending on the model and quality of supervision adopted by the supervisor, a

student can improve faster to become an autonomous researcher. Helping a student to become an independent researcher is a significant achievement – and can enhance your own teaching and research abilities. Studies has shown that when academic supervisors approach their supervision in the right manner, it not only help the student fulfill his academic requirement but enormous positive implication to the students social lives and named stakeholders affected by the research which include the student researcher, institution’s library, academic community, job markets and industry policy makers.

The framework above is based on the ideology that when educational institutions are able to clearly define supervision (in terms of goals and objectives expected of a research supervisor), set institutional or departmental policies to govern RS, provide the necessary resources (reasonable supervisor-student ratio, funding, motivational schemes for both supervisors, technology, and many more) and outspread QA responsibility to cover monitoring and supervising to ensure that actions of supervisors are in line with the institutions supervision goal definition and research policies. When this happens, it will obviously lead to QS and positive consequences for research.

6. METHODOLOGY

This research was descriptive in nature and the approach used was guided by the interpretive theory of social constructivism. Data was gathered qualitatively through the use of interviews. Population consisted of students currently in their final year and alumni and lecturers. Fifteen (15) teaching staffs (5 each from the three TUs), 15 final year students under current supervision (5 each from the three TUs) and 15 graduates (5 each from the three TUs) were interviewed. Respondent cuts across various academic departments, schools and faculties. The respondents were ascertained based on convenience and referrals from their colleagues. Challenge encountered from using this approach was that some respondents were not willing to speak to the interview questions as they fear that they might be releasing information to the wrong person. Both face-to-face and telephone interview method were used. Interview data was recorded using an electronic recorder with the consent of the interviewee. Recorded interview data was transcribed and discussed. In some cases ‘verbatim quotes’ was used to support discussion of results.

Also, archives of already supervised and approved project works were ascertained from the libraries and departments of these institutions. The contents were scrutinized in terms of philological punctuations, presentation, organization, expressions, mechanical/technical accuracy to ascertain the quality of work done by students. Parts of the phrases and sentences were typed and searched for using the google search engine to determine the novelty and the degree of plagiarism present in the research report.

7. ANALYSIS AND DISCUSSION OF RESULTS

7. 1. Definition of Supervision

The study found that there was a vague definition for supervision among higher educational institutions in Ghana. Supervision was perceived as “guiding” a student through the various chapters of project work to enable them meet time schedules for submission of

project work. This definition appears very limited compared with popular conceptualization of supervision in literature which transcends mere directing to include gatekeeping, mentoring, supporting, constructivism and relationship management (Lee, 2008; Todd et al., 2006; Ives & Rowley, 2005; Wisker, 2005). Also there was no properly established and documented institutional or departmental policy that defines project work undertaking and supervision in higher educational institutions in Ghana. All activities related to research/project work writing has been decentralized to the various departments to handle with no external body to hold these departments completely accountable.

Hence, supervision in TUs in Ghana occurs from disciplinary context. A respondent from one of the institutions said that “.... *The entire process of assigning supervisors to groups of students, undertaking supervision, and filling claim forms for groups supervised is an authority conferred to departments. The only role performed by the central administration in the supervision process is the payment of the claims submitted by supervisors*”. This is also the case with the other two institutions studied. A study by Donald et al. (1995) shows that most research universities in Canada has a history of decentralized administration for the management of its research and supervision related activities.

The same can be said of HLIs in Ghana and in other parts of the world. Inferring from the analysis above, it is imperative to comment that decentralizing research supervision is not bad but concentrated efforts must be made by the decentralized educational authorities to ensure that supervision policies made at the decentralized are level at par with institution-wide (central) supervision policies/bylaws, hence, the need for a body to hold decentralized authorities accountable.

7. 2. Research Policies

The study revealed that although departments had some form of policies on research conduct and supervision, they were not explicitly documented, and communicated among lecturers. The study further revealed that the absence of research policies accounted for several idiosyncrasies and malfunction behaviors exhibited by supervisors towards their students. Some supervisors approached supervision exercise unprofessionally. Quoting a student, “.....*for instance when we sent our project topic, he accepted it and asked us to come along with chapter one in 1 week time. After 1 week, when we sent it to him, he looked through our chapter one and concluded that we cannot write the project work. He proposed that we pay him to do the project work for us*”. This is a sign of unprofessionalism towards the lecturing and supervisory profession and could be blamed to the absence of research policies.

Another student, who happen to be an alumni of one of the TUs in Ghana aptly captured in an interview, “*during our time, we did not stress ourselves that much on the project work. The lecturer said that if we cannot do it, we should not outsource it. Instead the money to be incurred for outsourcing the project should be brought to him. So he did everything for us and graded us and we paid him*”. Questions to be raised here include; if some supervisors are demanding students to pay them a ransom in order to undertake the project work on their behalf, then where is the skill expected of students from the project work? How then can the research environment be enriched, how do students get exposed to home and international opportunities emanating from their research strength, where is the mentorship benefit expected of the supervisors to their students? In terms the effects of this attitude on higher learning institutions, the researcher wishes to raise the following question; where is the academic standard that these institutions promise to uphold? And what happens to the brand that universities wishes to

protect and promote? These are questions that future researchers should be thinking of providing answers to as a way of helping the academic research fraternity to normalize.

Analysing the effect of such unethical attitude from the view point of Lee (2008) proposed research concepts, it can be said that the functional model of guiding, project management and development examination expected of the supervisor to the student is compromised. Secondly, the enculturation model of instigating and nurturing the student as an associate of the disciplinary community is compromised. Thirdly, the critical thinking model of thought-provoking the student to evaluate and query their individual work is compromised. The emancipation model of mentoring to stir student own progress and introspection is compromised. Finally, relationship management model of emotional intelligence and suppleness used to motivate, foster and maintain the student is compromised. It therefore implies that approaching academic exercise with unethical attitudes such as those identified in this study could ruin the present and future development of students.

The study observed that generally, the institutions don't have a supervision framework to guide supervisors in their supervisory role. Supervisors were allowed to use their own supervisory orientation and discretion to supervise students. This is the case where some of the internal supervisors used in the supervision exercise do not possess the right qualification (no research background, no publication efforts and no requisite knowledge about the area of study) to undertake supervisory exercise. The question to raise here is how will they be able to supervise students on a topic? This practice appears not to add credence to the supervising exercise in these institutions as it creates numerous supervisory lapses such as inconsistencies in the outcome of the supervision (project report), poorly written reports and so on [more of these inconsistencies are captured below]. This is in line with Ogundepe et al. (2018) who advanced, but, in the construction context, that the quality of supervision has a key influence on the general presentation and efficiency of a project. In addition, Bui (2015) believes that unsatisfactory supervision is a major cause of mistakes and possible rework. Borrowing from clinical supervision environment, Cook et al. (2018) accepted that operating within a supervisory model grounds supervision practice and helps supervisors with intentionality and consistency.

7. 3. Resource Availability for Supervision

The study revealed insufficient resource base for smooth supervision of research work in higher educational institutions in Ghana. According to one Head of Department (HOD) *"we don't have the needed resources in terms of personnel, raw materials, technology, and financial support and so on to approach supervision of research as it should be"*. The study also identified that, of supervisors assigned to students for their research supervisions, only a handful were qualified and well-published as at the time of collecting data (June, 2015).

In line with the finding above, a participant who happened to be a HOD during an interview stated that *".....some supervisors assigned with project work supervisory roles themselves need supervision because if you read some project reports submitted by students and certified by their supervisors, it is very disgusting. Supervisor's themselves are not well published and they are gradually perishing in undertaking their supervisory roles. So, I think a regulation approach should be adopted among all Technical Universities in Ghana to determine who is qualified to supervise project work at both the HND and Bachelor's degree level as they all have a role to play in economic and sustainable development of Ghana"*.

The issue raised above advances concern on the caliber of staff who is engaged in research supervision in TUs in Ghana. It is no surprise when Dehghani (2009) noted that policy makers and planners in universities should pay sufficient attention to supervisory skill and knowledge.

Nonetheless, participants from other institutions attested that they assign Bachelor degree students to be supervised by only senior lecturers meanwhile the HND students are assigned to lecturers irrespective of whether the lecturer holds a senior lecturer status, well-published or have related knowledge in the area of the research. This development according to some participants places so much supervisory load on the few senior lecturers available in various disciplines.

The resulting effect of too much supervisory load on staff is the popular excuse of *"I don't have time"*. Lack of time; the study also revealed that in most cases lecturers assigned to students do not have enough time to meet and attend to the students. In an interview, while some students applauded their supervisors for their time, opportunity for face-to-face discussion and constructive criticism during their research work, others lamented that their supervisor never had time to meet them throughout the supervision process. Quoting one of the respondents, *"we went through hell with reaching our supervisor. Whenever we call him, he tells us he is not around and that we should proceed until the last chapter 5. The only day we had opportunity to meet him was the day he came to certify the project"*. Though the respondents admitted that this attitude exhibited by their supervisor made the project process easier for them, one could also argue that comparing the experience of the previous group of students who had the opportunity to engage on a one-on-one progress discussion with their supervisors, the later (groups that had no opportunity to meet their supervisors) were left with no learning and mentoring experience. Their skills in scientific research would have been more enhanced if they had the opportunity to meet on several occasions with their supervisor. A similar study conducted by Peng (2016) reported that although students yearned for opportunity to meet one-on-one with their supervisors, especially when they were disorganized about ideas or felt misled, the latter were unreachable and as a result, some students never had the chance to see their supervisors. Meanwhile, other students had feedback as late as six (6) months after submitting their progress report to their supervisors (Hockey, 1996).

Participants admitted that there was generally poor institutional arrangement for resourcing project supervision. There were no funds set aside to incentivize supervisors to aid students produce high quality research. This finding is consistent with the finding of (Yousefi et al. 2015). This situation put supervisors under no pressure to go the "extra mile". However, some participants admitted that they were given some form of incentive for supervision, even though they admitted that the incentives were not enough and consistent. A participant rightfully indicated that *"....even though we know that research supervision is part of our responsibility and for that matter part of our job description, we believe that adequate funding by institutions will help attach seriousness to the way we approach supervision"*. Other respondents were also of the view that quality research result also depends on the students' motivation to undertake the study. But students were not motivated to travel out to collect data for proper analysis mainly due to lack of funds. Some of them result to "table research"- a situation where data for the study is manufactured and analysed to suit the students' pre-determined research results.

As part of the ineffective institutional arrangements, the study also observed that there are no departmental or institutional guidelines that specify the minimum requirement for supervisor-student ratio. During the interview with some respondents who happened to be

lecturers, it was found that while some lecturers were assigned 6 groups of students (6:1) to be supervised, others had 4 groups of students (4:1), some had only one group (1:1) and others had as many as 15-20 groups (15-20:1) to supervise. The varying numbers of supervisor-student ratio revealed a lapse in administrative and institutional arrangements and unavailability of resource base - a possible reason for lack of attention to the pace of development of research students. In an attempt to further understand whether there was a justification for the varying degree of supervisor-student ratio, it was divulged by some respondents from KTU that the responsibility to assign students to supervisors is solely decided by the HOD.

Meanwhile, some lecturers from KTU in a particular department within the business school mentioned that they have committees responsible for assigning students to supervisors but due to lack of time, the committees hardly meet to execute their mandate leaving the duty to the sole discretion of the HOD to perform. A lecturer from the ATU rightfully mentioned that the reason for the varying degree in supervisor-student ratio is that “.....*what usually happens, not only in my institution, but, I believe in other institutions is that some lecturers lobby their way out to get more groups to supervise. The more groups supervised, the higher you earn from the supervision exercise*”.

This practice appears to be unethical and unjust to disadvantaged lecturers who may not have enough to supervise and students groups who may not be well attended to due to large volume of student groups assigned to a supervisor. From a developmental viewpoint, Donald et al. (1995) propped that neophyte researcher's needs intensive supervision so that they can become well-groomed to fit into the professional and academic community. The finding above demonstrates the absence of departmental policy on research student/supervisor ratio and limited resource base for supervision. It can also be argued that supervision was not structured these HLI. In a similar study in Canada by, Donald et al. (1995) respondents submitted that graduate supervision was typically not structured and not well resourced (Askew et al. 2016; Zhang, 2005).

7. 4. Relationship Management in Project Supervision

In terms of supervisor-student relationship, the study found that in most cases, supervisors tend to be informal and collaborative and friendly however they fail to maintain the distance expected of between an instructor and a student. A male participant said that “*our supervisor initially was a nice person, friendly and cooperative until the time when he developed interest in my female project partner. I believe things did not go down well between and with time his attitude changed towards us.*” The attitude of some lecturers wanting to meet students behind closed doors was a view held by more than 20% of the students interviewed. Highlighting on this idiosyncrasy is not an attempt to sabotage lecturers or supervisors in HLIs, but a way of emphasizing disreputable attitudes of supervisors towards their students which have no productive impact on the students but rather, leave a traumatic experience which is risky to the professional development of the student and an embarrassing name for such supervisors in the academic discipline. Nevertheless, some students applauded their supervisors on grounds of professionalism- had their office doors open and met with them sometimes in open places at scheduled time, appreciated students efforts, provided productive criticisms, exhibited emotional intelligence and leadership required of a research supervisor. Others also added that supervisors even took records of proceedings to serve as a reference point. This shows that in as much as some supervisors' relationship towards their students was very appalling, other had a rather more productive relationship with their students.

According Armstrong (2004), engaging in an interaction with project students is a skill development for both the supervisor and the supervisee. Further, Ghadirian et al. (2014) studied some UK Universities and found that supervisors that were very communicative with their students tend to produce a high quality research output. This suggests that more inter-personal interactions and positive relationship building and upkeep between a supervisor and a supervisee are significant in determining high quality thesis report. Hilbert et al. (2014) highlighted that in some cases supervisory relationships might be influenced by differences in cultures and values of the supervisor and the supervisee and advised that this conflicting knowledge be negotiated in order to ensure a long lasting and productive relationship processes and outcome.

7. 5. Quality Assurance and Project Supervision

It was also discovered that the quality management systems of the institutions are not robust enough to regulate project supervisions in these institutions of higher learning. Even though Bachelor students are made to defend their project works it looks like the QA department does not play any role in ensuring the effectiveness of this exercise. This is evidenced in a study by Okae-Adjei (2016) on internal QA of higher education institutions; he found that polytechnic (now TUs) institutions in Ghana lack internal quality management systems that are vigorous enough for effective self-regulation of their operations when matched with practices of top Ghanaian universities and other world-class institutions globally.

The study also revealed that institutions lack control systems to measure and appraise the quality of work supervised by lecturers. The study, for instance, noted that technical universities have not procured Turnitin software that will help to determine the authenticity of reports produced by students.

This situation, respondents believe aggravates the temptation of falling victim of plagiarism. Some of the students interviewed don't know what is meant by plagiarism. This tells of their research orientation and overall academic integrity and honesty. A senior lecturer explicitly commented that *"...we at Accra Technical University don't have the TurnItin software because it has not been made a matter of policy. So for the time being we only make sure that students reference their work appropriately until the time when the school will see the need to procure the software and make it assessable to all lecturers"*. But it should also be known that plagiarism deals with percentages of work copied and that students are made to reference their work appropriately still does not reduce the percentage of plagiarized work. Meanwhile, a HOD in Koforidua TU admitted that management is still in progress talk on how to introduce a Turnitin policy as a way of reducing the tenacious gross academic dishonesty exhibited by tertiary students. While we are still waiting for the development to be implemented, it is prudent to emphatically comment that the absence of efficient policy instrument such as weak administrative rules and standards governing not only project work undertaking but regular academic essays such as assignments and quizzes in these institutions is possibly a contributing cause for the laid back of business project work undertaking in TUs compared to the public universities and other western universities.

Consistent with the finding of Yousefi (2015), unprofessional attitude from both supervisors and supervisee emerged in the course of the study and this situation was blamed to irregular evaluation criteria, absence of knowledge in thesis verdict and scoring (Pyhältö et al. 2015) and inappropriate standards in supervision and evaluation. All these depict quality issues in research supervision.

7. 6. Effect of Challenges on Research Outcomes

The challenges discovered above can be categorized into three main classes. These include absence of comprehensive policies and procedures to guide research supervision. Secondly, dearth of resource base for supervision exercise and third, absence of internal checks from the quality assurance directorate on supervision best practices. These challenges unquestionably has implications on the graduate individual, reports written and submitted to the library, academic community and the job market.

7. 7. Implication on Graduates

Graduates are output of an academic institution. Askew et al. (2016) held that quality educational processes yield quality graduates. With research supervision being part of the higher education institutional processes, it holds that students who undergo proper supervision become graduates better equipped with the desirable skills and adds value to graduate individual. Contrary to this view, given the variance identified in project supervision above, it is obvious that graduate students relatively are bound to lack the necessary skills relating to critical thinking and problem solving, lack of attention to details, poor communication skills, poor writing skills and lack of ownership tied with leadership.

These inability makes it difficult for graduates to get absorbed into the job market. In support, the World Bank in 2010 revealed that about 48% of Ghanaian youth are Jobless. This statistic comprised both the skilled (graduates) and unskilled youth. A recent study at the University of Ghana by the Institute of Statistics, Social and Economic Research, ISSCER in 2007 found that only 10% of young graduates acquire job after first year of leaving school. In addition, data from the institute also suggest that majority of graduates relinquish their unemployment status mostly after 10 years of staying without job. One reason, given by the institute as accounting for this problem is the lack of employable skills among present graduates. The author believes that project work supervision is a skill-packed academic exercise capable of equipping students with if not all, at least about 50% of skills industry players need. Therefore, approaching the exercise without care affects the students' development. Past studies have made it very clear that a crucial aspect of training students and fledgling scientist is to deepen them with the fundamental capabilities and know-hows to become valuable researchers and get them ready for the job market beyond research and academia (Roland 2007; Salmeh et al. 2014; Basturkmen et al., 2014).

7. 8. Implication on Institutions' Library

The study revealed that institutions library which is meant to be a repository of research and intellectual resources has rather become a "dumping site" for "irrelevant" (90-100% plagiarised, invalid and non-verifiable, not generalisable, no logical rationale and so on) project reports. A visit to the institutions library to access research reports written by students particularly, students from the faculty of business including; Accountancy, Procurement and Supply Chain Management, Marketing, Secretary ship and Management Studies and so on revealed several incongruities ranging from spelling errors, untrue facts and references, no technical accuracy and logic, low critical thinking abilities, inappropriate structure and flows and unacceptable styles. Surprisingly, these documents are certified by supervisors. Till date, submission of project work reports to libraries remains an institutional policy that students have to abide by in their clearance process. Though the initiative of submitting project work reports

is applauded due to its importance in advanced and research inclined universities, the researcher does not see any concerted effort in this practice to improve research within the academic community of institutions studied but just a mere formality to process students out of the institution. Additionally, students complained that reliance on past project reports in institutions' library had a very small impact on their research, a situation which they described rather exposed them to the temptation of plagiarism. To support this claim, Oluwatobi et al (2014) found that library resources had very low impact on students' research work. As a result, students were not satisfied with the use of library information resource.

7. 9. Implication on Academic Community

It was found that the impact of students on the academic community is minimal. When respondents were asked to rate this on a scale of 1-3 ranging from low, middling and high, it is incredible how majority of respondents rated the students research impacts on academic community as low. Further, none of the students (both current and alumni) interviewed admitted to have published an abstract or paper in local or international journal or conducted an independent research for the purpose of satisfying curiosity, knowledge acquisition or industry problem-solving. This implies that supervision style adopted in these institutions have failed to enculturate students into the academic community and has also failed to emancipate students from dependent to independent researchers. Bansell (2011) and Fenge (2012) as cited in Bui (2014) believes that QS plays a decisive role in training, endowing and easing students to become independent researchers, or contributes to making their lives and the world better (Moxham et al., 2013). According to Trott et al. (2018), scholarly publication is a universal goal and development traversing all academic community as it has become a capability to raise institutions' ranking, enrich an academic faculty, differentiate both students and lecturers and make the academic environment more competitive to the benefit of the wider economy. This development appears far different from what pertains among TUs in Ghana. Though the TUs have the desire to achieve the much needed research capability among both Lecturers and students, it appears that they have not set their research and supervision policies and structures right to achieve this capability.

7. 10. Implication on the Job Market and Business performance

The study revealed that amid the high level of unemployment in the country, industry recruiters cannot still find the right graduates they need to fill in vacant positions. Respondents disclosed that graduates were academically good and technologically savvy as shown on their credentials but lack the requisite hard and soft skills such as business writing skills, problem-solving skills, basic communication skills and many other critical skills needed for progress and industrial value-addition. This, according to respondents accounts for the wide skill gap in most industries in Ghana. Respondents acknowledged that research supervision accounts for the skills deficit among graduates and a possible cause for poor business performance. A respondent said *“Research work in universities is a crucial exercise that shapes and prepares a graduate for the Job Market. It not only help the students to meet the requirement for award of degree but acquaint the student with skills such as critical thinking, problem solving, team work skills, communication skills and leadership skills and these are the skills industry is looking for. Students who do not undergo a comprehensive supervision during the research exercise have deficits of skills contemporary industry needs”*.

This finding is not far from Ejiwale (2015) who espoused ten (10) causes of skills gap among graduates. Among the list of causes identified, poor communication skills and failure to learn how to learn skills were dominant conditions of skills gap among young graduates. These are skills that can be acquired by students who go through proper research supervision and training experience but the lack of it culminated into a condition today that everyone refer to as skill gap.

In addition, though respondents refused to be judgmental about the nature of supervision of students in TUs in Ghana, they were of a popular opinion that university graduates are a reflection of supervisors' supervision effort, implying that a positive bearing exist between quality supervision and quality (skillful) university graduates.

8. DISCUSSION

The principal purpose and understanding of project work supervision in the business faculties and disciplines studied across the TUs in Ghana is to support students' progress to partially fulfill their requirements for the award of a diploma or degree programme in a timely manner and in accordance with the rules and regulations of the institution. The study revealed that HLIs in Ghana have limited and ambiguous understanding for project work supervision. Their understanding of the exercise is limited to the scenario where we have a student assigned to a supervisor whose role is solitary to provide guidance to the students under supervision whilst the students also take instruction. Ordinarily, this understanding is mediocre and not comprehensive as there are more appreciative definitions as far as modern day supervision is concerned. These include; knowledge of policies and procedures governing project supervision, availability of the project work supervisor, clarifying and understanding the expectation of both supervisor and students, performing the functional roles as a supervisor, mentoring, and emancipating the supervisee to becoming an independent researcher (Lee, 2008). TUs in Ghana do not have an embraced institutional policies governing research project work supervision. Moreover, departmental policy which existed was not properly documented and communicated among supervisors and students.

The lack of policies to govern project work supervision in these TUs was found to be the leading cause of unethical approach to supervision by supervisors. According to Lopez (2016), the success of any supervision exercise partly depends on the adequacy of resource available. It was revealed that TUs lack the means to resource its supervision exercise. These include; limited funding, lack of motivation for both students and supervisors, limited number of supervisors which led to too much supervisory load on supervisors and many more. In addition, few numbers of respondents recorded a poor and unproductive working relationship with supervisors which were a recipe for supervisory failure. Also, the study revealed that QA policies and procedures were limited in scope. QA policies and procedures were not vigorous enough to regulate how project work was supervised in TUs in Ghana.

These anomalies had negative implication on the quality of supervision such that; 1. It impeded the ability of supervisors to execute their functional supervisory roles of managing the entire supervisory process as a project; 2. Supervision failed to enculture students; 3. Supervisory efforts failed to emancipate students from dependent writers/researchers to independent writers/researchers; 4. Supervisory efforts also failed to promote a long lasting and productive relationship between supervisors and students.

Consequently, research outcomes were also affected negatively; 1. Graduates lacked the essential employable skills; 2. Poorly written project reports demeaned the institutions' library as a resource center; 3. Academic community also experience a reduction in the quality of its members; 4. Skills gap exist in the job market; 5. Complains from industry employers about poor performance of new graduates.

9. CONCLUSIONS

Clearly, it can be attested that the problems with project work conduction and supervision in HLIs, particularly among the TUs are just as visible. A disappointingly wide-ranging, yet honest, appraisal must conclude that our mode of supervising and undertaking academic project works is generally disjointed, not skill-oriented, and truthfully pigeonholed as "a mile wide and an inch deep." Technical Universities in Ghana should clearly define an institution-wide policy and framework to guide project work supervision. The policy and framework is to clarify the understanding of supervision between supervisors and students. This will enable a common understanding of the terminology among them. Department should also devise their own internal supervision policy which should not contradict institution-wide policies on research supervision. These policies must be well communicated and understood by all lecturers and students. This will enable them know their roles and responsibilities as far as the project undertaking and supervision is concerned. Accordingly, the unprincipled approach towards the supervision exercise will be eradicated. Furthermore, TUs should adequately resource research undertaking in HLIs. This is one of the ways by which commitment to produce quality research results can be ensured by both the supervisors and students.

The following measures can be considered; project work workshops, seminars and training sessions should be held for supervisors to equip them with the necessary supervisory skills needed for improvement. Secondly, supervisory load should be based on certain factors such as supervisors' past supervisory performance, availability, current position in the institution, other academic responsibilities. Consideration for these and many other factors will help to find the optimum supervisory load for each supervisor. Moreover, Relationship between a supervisor and student must be clearly defined by the institution by outlining the expectations of the relationship. Supervisors, as a matter of principle, should try as much as possible to maintain a working and productive relationship with students. Relationship should be managed in an intellectual manner such that it does not become too sensory plus unprofessional to affect the outcome of the supervision project.

In addition, quality assurance units should consider putting project supervision into perspective. Correspondingly and in many instances, qualitative modifications should be made to the way supervision is conducted. For instance, QA processes must be well structured. Thus, project work committees should be instituted, project work advisory board should be setup, systematic progress evaluation team should be in place, and more importantly, skills growth programmes should be organized for project work students. A Total Quality Management (TQM) approach must be implemented to include all processes of the institutions, which supervision of project work is a part. Implementing an all-encompassing quality management approach will prompt commitment to maintaining high standards in project work undertaking and supervision operations. It will also instigate a permanent supervisory culture and climate where supervisors will continuously look for ways of improving on their supervisory approach.

Consequently, students undergoing processing as graduates would be unblemished and possess the ability to make meaningful contribution to the academic community, fit for the job market and contribute immensely to improved business performance.

This work is qualitative in nature. Future researchers can follow suit by conducting a quantitative study on similar research topic to validate the findings in this study. Secondly, future researchers should also investigate the reasons why tertiary students outsource their academic project works at a fee and its effect on the skill gap in industries. Particularly, an understanding should be drawn in an attempt to determine whether outsourcing of project report have a correlation with poor supervisory approach of supervisors.

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