

Engaging Postgraduate Students as Research/Teaching Assistants: Mutually Beneficial

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Abstract

While modern universities often perform more diversified and even contradictory functions (Castells, 2001) due to their particularistic circumstances and implicit pressures from a variety of sources (Castells, 2001), the fundamentality of teaching and research remains uncompromised among several universities worldwide. Ghanaian universities have equally not departed from this time-honored academic tradition of teaching and research. The University of Energy and Natural Resources is not an exception. The university has, over the years witnessed some tremendous growth in the areas of increased student population, infrastructure and overall research output. The study highlighted the novelty in engaging students in the school of Graduate Studies in the UENR to augment the inadequate lecturer strength in the university as well as assessed some of the major benefits that can be attained as a result. The study suggested that some of the graduate students be allowed to assist permanent lecturers in teaching their undergraduate courses as research and teaching assistants.

Keywords

students – university – research – Graduate – lecturers

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1. Introduction

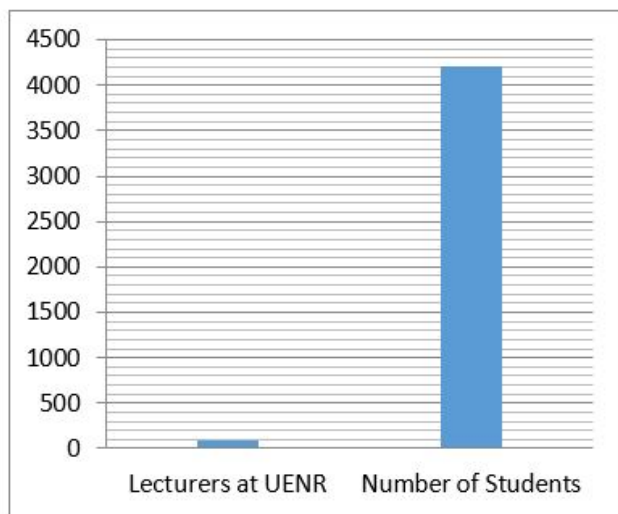
Universities traditionally are preoccupied primarily with the dual role of knowledge generation through research and the transmission of same for the purposes of skill training for students to meet the human resource needs of the economy (Brennan et al, 2004) as well as impacting on public policy formulation (de Vibe et al, 2002). While modern universities often perform more diversified and even contradictory functions (Castells, 2001) due to their

particularistic circumstances and implicit pressures from a variety of sources (Castells, 2001), the fundamentality of teaching and research remains uncompromised among several universities worldwide. Ghanaian universities have equally not departed from this time-honored academic tradition of teaching and research. It would be recalled that the Asquith Commission which was established in the early 1940s to inquire into the prospects for higher education in the then Gold Coast recommended for the setting up of a university to “promote learning and research” and until date, subsequent universities in Ghana have prioritized the twin duty of research and teaching.

The University of Energy and Natural Resources is not an exception. Since its establishment in December 2011 by an Act of Parliament, Act 830, the university has sought to provide leadership and management of energy and natural resources through evidence-based research and teaching. The University Act 830 subsections 2(1) f, g, h, and i for instance requires that UENR undertakes research in areas within its mandate of providing sound higher education and research skills, disseminating research results through publications in journals, books and other outlets and providing extension and consultancy services to impact positively on the society. The global market for energy is growing dramatically and high usage of energy within the mandate areas due to either direct or spill-over effects from university research could mitigate global climate change effects.

The university has, over the years witnessed some tremendous growth in the areas of increased student

population, infrastructure and overall research output. Currently it has a student population of more than 4200 up from 154 in 2011, distributed among four schools, namely the School of Engineering, School of Sciences, School of Agriculture and Technology, School of Natural Resources and the School of Graduate Studies. This tremendous acceleration in student enrolment has however not moved in tandem with the number of Lecturers required to handle the enormous tasks of teaching and research. The university is reeling under shortage of teaching staff. With an academic population of only 96 lecturers against more than 4200 students, the UENR adds to the institutions in Ghana with unacceptably high student-to-lecturer ratios, currently standing at approximately 43:1 (Registrar's office, 2017). Note however that the poor lecturer-to-student ratio is not only peculiar to the UENR but rather a national problem. Recent reports from the National Council for Tertiary Education (NCTE) for instance decried the woeful inadequacy of the country's overall 2676 academic staff in its public universities to handle the supervision and teaching of the over 128,000 students under their care. More specifically, the country's universities have such abnormally high Lecturer-to-Student ratios as 161:1 and this runs through most of the major courses such as engineering, Sciences, humanities, applied Sciences and so on.



Registrar's office (2017)

Figure 1. Lecturer – student population in UENR. Registrar's office (2017)

Multiple reasons could account for this universal inadequacy of Lecturers in the country. On the one hand, the raising of the minimum teaching requirements for universities to a doctorate degree by the National Council for Tertiary Education means that several potential lecturers without this higher degree would be refused engagement (Afful, 2015). Additionally, the freeze on public

university recruitment by the government and general cuts in universities spending represent another major explanation to the acute shortages of well-qualified faculty in the country's universities. Research on the impact of low lecturer-to-students ratios abound in the literature of education studies. One of such key meta-studies was the seminal contribution of Glass and Smith (1979) who statistically analysed about 300 reports involving more than 900000 students and came to the conclusion that smaller student class increases teacher's instructional, physical and evaluation competence. They argue that teaching and research increase progressively once class size fell below about 15. Several other studies have equally established the inverse nature of the relationship between small faculty size and teaching and research effectiveness (See for instance Molnar et al, 1996; Mathis, 2016). On the part of Molnar et al (1996) who employed a well-designed annual evaluation of student achievement, class size and staff strength using a quasi-experimental design, a significant and substantial effect sizes of 0.2 standard deviation was reported with class sizes below 15. Effectively, low faculty strength goes to affect the capacity of universities to deliver efficiently its core mandate of knowledge generation and teaching.

While admittedly a class size of 15 may not be practically possible in the Ghanaian context, it nonetheless beacons the need to rethink our strategies for increasing the population of lecturers to handle the ever accelerating student numbers in the country's universities. With this piece, I propose to highlight the novelty in engaging students in the school of Graduate Studies in the UENR to augment the inadequate lecturer strength in the university. I argue out the need for the University to employ the services of the graduate students as part-time lecturers to teach some of the courses in their field of study as well as assisting permanent lecturers. I do this by advancing a 7 – point argument for the need to look beyond the conventional supply of lecturers to concentrate on internal student resources in the UENR and its capacity to fill the Lecturing shortfalls in the university. Before this, I briefly discuss the Graduate School in the section below.

2. The School of Graduate Studies of the UENR

The University Council approved the establishment of the School of Graduate Studies at its first meeting. The Graduate School after receiving its third batch of graduate students currently has a population of 245 students. These students are enrolled in Masters and Doctoral programs in the fields of Engineering, Sciences, Agriculture and Natural Resources. The School currently has majority of the graduate students working on their research and thesis.

Table 1. Programs and student population in the UENR School of Graduate Studies

Graduate Programs	Number of students
1 PhD Sustainable Energy Management	26
2 PhD Energy and Environmental Engineering	30
3 PhD Social Forestry and Environmental Governance	24
4 MSc. Sustainable Energy Management	52
5 MSc. Energy and Environmental Engineering	40
6 MPhil Social Forestry and Environmental Governance	73
Total	245

Registrar's office (2017)

It is realized from Table 1 that the university has a good number of Graduate capable of being assigned teaching and research responsibilities. It must be emphasized that engaging graduate students as teachers is in consonance with international best practices and also portend many mutually beneficial advantages to both the graduate student and the university. While student Lecturers could improve upon their post-graduation employability with their part-time teaching experience, the university also benefits from their energy, talents and skills. The university's 96 Lecturers could have more concentration on their core duties of teaching and research when auxiliary duties such as part-time teaching, script marking and research assistantship, among several others are taken care of by part-time lecturers from the School of Graduate Studies. The overall significance of this engagement is summarized below.

3. Why employing students from the school of Graduate studies is mutually beneficial

3.1 Revenue/Income generation

The enrollment of the PhD/MSc/MPhil students as part-time lecturers will serve as a source of additional income/aid to the students who are not financially stable. Graduate programmes require a lot of research thereby causing a lot of load on students' finances in order to finish the course. One needs to do a lot of research and such, without money, the students will not be able to carry out an adequate, accurate and result oriented research. If the students are engaged, the income they will earn from the part-time lecturing will serve as a source of support or relieve for them. For example, those who are on scholarship of whose payment do not cover the research.

3.2 Reduces work load of permanent lecturers

Again, it reduces the work load of lecturers. The workload on the few permanent lecturers is quite enormous because of the current embargo placed on government recruitment. This has help to increase the course load on lecturers as well as their own academic research work. Enrolling graduate students on part-time bases will therefore serve as a great purpose to reduce the workload on the lecturers.

3.3 Source of Motivation

Also, the enrollment of the PhD/MSc/MPhil students as part-time lecturers will serve as a source of motivation for those who have qualified to be beneficiaries. If such opportunity is given, the students who will benefit will see it as a recognition given them for their hard work. In so doing, it will encourage and motivate them to do more and also for the others to follow. Motivation or recognition is very important in the life of every individual because it makes them feel loved, important and have sense of belonging.

3.4 Develops the content of the subject matter.

Part time lecturing moreover develops the content of the subject matter of the courses taught. There is a school of thought which says that, the best way to learn is to teach. If such students are therefore given the opportunity to teach, it will equip them on the integral content they have learnt as they teach these courses at the undergraduate level.

3.5 Open up students on the methods of lectures presentation

Part time lecturing opens up the students to the methods of lecture presentation. Enrolling PhD/MSc/MPhil students on part time teaching will help to open students or candidates to how lecture presentations are done. It will help prepare them on practical presentation in the class which will equip them to have absolute control over lecture presentation in the class.

3.6 Open up the students to research application.

To add up to the aforementioned, it also opens up the student to research application. Graduate programs involve a lot of research work which require each student to for example undertake a research on six districts in Brong-Ahafo Region as his/her total sample space. This basically requires hard work in order to undertake such an academic research work so putting such students on part-time lecturing will help expose them to a lot of research applications as they work close with the main lecturer/mentors.

3.7 Enhances the confidence level of students.

Lastly, it enhances the confidence level of the students. Permanent lecturers will mentor graduate students towards teaching and this idea will intend help boost the confidence level of the students. This will also enhance the students to articulate what they learnt to the main teaching in the classroom, for example, doing the practical work from their own mentors.

4. Criteria for Selection

The following procedure is to be used in the recruitment and employment of graduate assistants.

1. All graduate assistant positions must have a position description which includes a comprehensive list of required qualifications for the position by the department.
2. All graduate assistant positions must have a description of duties associated with the position and a vacancy notice should be completed annually.
3. All graduate assistant position descriptions must be submitted to Human Resources for approval by the hiring department.

5. Recommendations

For the enrollment of graduate students to take effect, it is suggested that the Management of the University sets up a committee to review the performance of graduate students and recommend some to be enrolled as part time lecturers. Many graduate students, especially PhD students, may perform well in their taught courses in the first year and therefore can be recruited to teach undergraduate courses as part time lecturers during their research and thesis period. Again, it is suggested that some of the graduate students be allowed to assist permanent lecturers in teaching their undergraduate courses as research and teaching assistants. This will help relieve lecturers of the extra course load they may take.

6. Conclusion

The Graduate school as part of its objectives seeks to provide excellence in post graduate education in Energy and Natural Resources, in recruiting and maintaining a diverse student population and to foster opportunities in research, creative achievements and professional development. The School places emphasis on interdisciplinary teaching and research, incorporates sufficient flexibility for its students to have diverse course options, allows for internationalisation and intercultural learning and are consistent with our diverse natural resources. It is in view of this that the graduate students are believed to be equipped with much knowledge and experience and as such can be enrolled as part time lecturers in the University to help teach undergraduate courses. This will in the long run help the University to assign minimum courses to lecturers to enable them work efficiently and effectively.

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