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Multivariate Analysis of Students' Perception of the Impact of Lecturers' Ranks on their Performance at the Faculty of Mathematical Sciences, University for Development Studies-Navrongo, Ghana

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Abstract

This paper examines students' perception of the impact of lecturers' ranks on their performance across departments in the Faculty of Mathematical Sciences (FMS) of the University for Development Studies (UDS), Navrongo Campus. The study used a self-designed structured questionnaire administered to 160 respondents (students) of the Faculty. All the 160 questionnaires were retrieved, which represents 100% response rate. The data were analyzed using Statistical Package for Social Sciences (SPSS) version 25.0 for windows. Multivariate Analysis of Variance (MANOVA) results showed that (at $P < 0.05$) Senior Lecturers received higher ratings followed by Lecturers and then Assistant Lecturers, indicating that the ranks of Teaching Staff significantly influenced their performance across the various departments of the Faculty. Recommendations and implications for management of Higher Institutions of Learning (HIL) have been discussed. The paper contributes to the literature in the area of supervision and evaluation of the performance of teaching staff in the HIL context.

Keywords: assessment, HIL, lecturer, performance, ranks, students

1. Introduction

The demand for quality service delivery by consumers of educational services has witnessed a significant increase during the past thirty years. This might have resulted from the fact that customers (students) are now well informed and hence, are complex in their taste and preferences. The movement towards mass participation in higher education and the greater stakeholder scrutiny of educational services has compelled Higher Institutions of Learning (HIL) to become more quality-conscious. This further places HIL in a position to appreciate the fact that quality service provision is no longer an option but a requirement and a contractual obligation that HIL owe their stakeholders.

In an increasingly diverse and complex teaching and learning environment in HIL, the area of primary concern is the drivers and debates sparking a growing attention to good quality teaching (Chua & Raymond, nd). In a competitive world of education today, most HIL and students at large, demand for effective teaching and learning to take place both within and without the classroom. They expect lecturers to help raise the level of students' motivation to learn so that their academic and non-academic achievements can be further enhanced (Chua & Raymond, nd).

A lecturer is concerned with discovering and generating of new knowledge through research and other academic activities. Lecturers are dedicated to the performance of their duties, such as the production of good publications and to undertake some administrative duties as well as satisfy the academic needs of students, hence they (Lecturers) need to continually improve the quality of their teaching methodologies and remain abreast with the task within a modern educational institution (Bernard, 1997).

A Lecturer's perception of his or her performance may be different from the actual, regardless of the strategy or teaching methodology employed. Therefore, the actual happenings on the ground, with respect to how lecturers are performing, need to be evaluated and communicated back to them. One widely accepted method of evaluating the effectiveness and/or performance of lecturers is Students' Assessment of Courses and Lecturers

(SACL), which is often carried out at the end of a teaching semester/trimester or at the end of each course; in some institutions.

In the Faculty of Mathematical Sciences (FMS) of the University for Development Studies (UDS), the exercise is usually conducted at the end of each lecturer's formal teaching contact with his or her students for the trimester, but before the trimester's examinations are conducted. This is to ensure that examination questions (and students' grades) do not influence students' ratings of their lecturers during the assessment. SACL refers to a periodic (formative) evaluation of lecturers' performance by students, using a self-administered structured questionnaire.

Engku, Hishamuddin, Zulazhan, Zailani, & Mohd (2015), defines SACL as a systematic gathering and analysis of information on the basis of which decisions are taken regarding the effectiveness, efficiency and/or competency of the teacher in realizing set professional goals and the desire of the school to promote effective learning. For purposes of ensuring effective teaching and learning, it is very relevant for lecturers to get feedback from recipient of the teaching experiences. The formal implementation of SACL, mainly with a view to improving lecturers' efficiency, is not new in HIL.

Several documentations and studies have been conducted on SACL by universities' management to determine lecturers' effectiveness and relevance to their profession. However, little is available in the literature with respect to whether lecturers' ranks have a bearing on their performance. Given the recognition of this gap, and that Principals, Deans of Faculties and Schools, Heads of Departments and the Management of UDS need to understand students' feedback on their lecturers and how their (Lecturers) ranks affect their performance, it becomes imperative to examine the impact of Lecturers' ranks on their performance in order to develop strategies and inform policy for improving effective teaching and learning in HIL in general and in the UDS in particular.

In view of this, the main objective of this study is to examine students' perception of the impact of lecturers' ranks on their performance at the FMS, UDS Navrongo Campus. This paper sought to address the following specific objectives:

a. to determine whether there are significant difference among lecturers' performance and their ranks.
b. to determine the sensitivity of the model used in the study.
c. to determine lecturers' performances across departments.

1.1 Review of Relevant Scholarship

SACL has been recognized long time ago, as one of the most accepted methods of evaluating lecturers' performance. Evaluation of lecturers' performances by students began as early as 1915 (Wachtel, 1998). In the 1960's, informal students' evaluation of lecturers was introduced by an enterprising college students (Cahn, 1996). Subsequently, its usage gained wider recognition despite questions regarding its reliability and validity. Centra, 2003 study (as cited in Yahya & Norah, 2012) found that, there were well over 2000 studies on the students' evaluations topic referenced in the ERIC system, in which much of the research and debate was centered on the validity of these student ratings. The result of the study indicated that majority of these studies tend to conclude that these evaluations are reliable and valid when compared to other measures of effective teaching.

The debate, as to the usefulness of SACL, has been noticed decades ago and has prompted extensive discussion in the literature. For example, whereas, studies by Benjamin, (2011); Liile & Anass, (nd); Yahya and Norah, (2012); Chua and Raymond, (nd) and Engku et al., (2015) conclude that SACL is reliable and useful, studies by Machingambi and Wadesango, (2011) and Richmond, (2003) maintained a negative position against the reliability of SACL and that other methods need to be used to validate the findings of SACL in the HIL research context.

Despite this mix views, SACL serves many functions, ranging from diagnostic feedback to improving teaching and learning and to provide additional points or evidence for tenure and promotion (Marsh, 1984, cited in Engku et al., 2015). Aside being a measurement tool on teaching effectiveness, the feedback obtained from the SACL can help the lecturers concern to grow and develop professionally through self-reflection on their practices (Chua and Raymond, nd). To the learning institution, the results of the evaluation is beneficial to the managing directors to identify specific areas for improving the performance of the lecturers (Yeoh, Ho and Chan, 2012, cited in Chua & Raymond, nd) or organizing relevant continuous professional development programmes for skill enhancement of the teaching staff (Chua & Raymond, nd).

In some cases, the outcome of SACL is used to formulate key performance index of lecturers in staff appraisal for both promotion and tenure decisions (Griffin, 1999; Liaw & Goh, 2003, cited in Chua and Raymond, nd).

Some policy makers may also use the information to make important decisions pertaining to compensation, re-hiring and termination of contracts of teaching staff (Chua & Raymond, nd).

It is worthy of mention here that, the term "Lecturers" in this paper, is used to refer to all categories of teaching staff (Senior Lecturer, Lecturer and Assistant Lecturer) who are directly involved in teaching and learning activities in the University.

1.2 Students' Assessment of Courses and Lecturers at the UDS

The UDS, through the Directorate of Academic Planning and Quality Assurance (DAPQA), conducts the SACL to assess the impact and effectiveness of lecturing activities by lecturers. The purpose of this exercise includes monitoring of lecturers' attendance to classes, monitoring of lecturers' professional development, tracking of newly appointed lecturers' probation-period performance, performance appraisal, promotion, and for general quality assurance purposes.

Hitherto the 2017/18 academic session, SACL was manually conducted at the University, where students were given the lecturers' assessment forms to manually rate their lecturers. The completed forms were then submitted to the DAPQA for onward analysis and reporting. A report would usually be generated from the analysis and submitted to the Deans of the various Faculties and Schools. Each Dean of a given Faculty or School, in consultation with Heads of Department in that Faculty or School, then holds discussions with each lecturer on his or her performance, as per the report of the SACL. Up-to-date, this is still the case except that the exercise is now conducted online. With the online SACL, each student signs into his or her portal to access the rating/assessment form. The student, after accessing the form, then rates all lecturers of courses that were taught him or her. The data analyst at the DAPQA then pulls the data online for analysis and subsequent generation of reports.

The online SACL was borne out of the thinking that in the UDS, much of the administrative work done is through the application of information communication technology (Ibrahim, Mavis, & Bawa, 2018), and that, there was therefore the need for the University to integrate the SACL into the existing services of the University's management information system. The online SACL is favoured over the traditional manual SACL in that it gives students the freedom to rate lecturers without the presence of any lecturer, it is economic since it does not involve the use of papers, it is less time consuming and ensures that only students have access to the completed assessment forms, unlike the traditional paper assessment.

The DAPQA, as part of its mandate of ensuring that all teaching staff in the University become quality-conscious as they go about their official interaction with their students, organizes yearly Continues Professional Development (C.P.D) for all teaching staff in the University on current best practices in teaching in the HIL. Apart from this effort, the Directorate also conducts yearly orientation workshops for all newly appointed teaching staff of the University so as to enable them fit into the main stream teaching in the HIL.

Base on the foregoing, and given that all teaching staff are given almost the same amount of training (C.P.Ds and Orientation workshops, as indicated earlier), the University deems it fit to assess all teaching staff using a uniform assessment criteria or instrument, irrespective of their years of service in the University. This, in effect, has validated this study.

2. Method

2.1 Respondents' Characteristics

The Faculty, as at the time this study was conducted, that is, during the second trimester of the 2016/2017 academic session, had a total student population of 1478 and 48 Lecturers (16 Senior lecturers, 28 Lecturers and four (4) Assistant lecturers). Level 100 and 200 students were 455 and 350 respectively. Out of the remainder, 320 were level 300 students and the rest (373) were final year's students. The Faculty had three departments: Mathematics, Statistics and Computer Science departments with student population of 518, 410 and 550 respectively. The respondents were made up of mixed gender with a minimum age of 18 years and a maximum, 29.

2.1 Sampling Procedure

The study adopted a quantitative approach and was conducted across the various departments of the Faculty. Given that the number (1478) of the study population was known, and since the numbers of students were not the same across the various departments, proportionate stratified random sampling was used to sample the respondents from each department. Random sampling is used when the population for the study is finite (Agyedu, Donkor, & Obeng, 2007). A sample size of 160 was used for the study; with the mathematics department

represented by 56 respondents. Forty-four and 60 respondents respectively represented the Statistics and the Computer Science departments.

The data for the study were pulled from the online SACL and were therefore analysed digitally, which means that the study could have used the entire students of the Faculty instead of sampling only 160. The students were sampled for the study because the authors wanted the study to have a fair or proportionate representation of respondents/students of the various departments in the Faculty; and therefore, to use the entire students of the Faculty for the study will have meant that some of the departments will have been overly represented or not represented proportionately in the study; which in effect, will have affected the generalizability of the study.

2.2 Measurement of Variables

A self-administered questionnaire was designed to assess students' evaluation of the characteristics of lecturers (performance), courses and the learning environment. The questionnaire consisted of 20 items with 17 of them focusing on lecturer's characteristics and the remaining three (3), on the course and on the students' learning environment. The themes for the lecturers' characteristics were 'lecturers' methodology of teaching', 'lecturers' knowledge of the subject matter', availability of course materials and linking materials to field practicals', 'availability of the lecturer to students both within and without the classroom', 'lecturer allowing students to ask questions'. The questions for the course characteristics and the learning environment, which is labeled as 'general' in this paper were 'availability of audio visuals', 'comfort in class due class size, space and seats' and 'availability of Teaching and Learning Materials (T.L.Ms)'.

The questionnaire items were rated on a five-point ordinal scales ranging from 'very good to 'very poor' with 'very good' fitted into the range scores of 1.00 – 1.49. Whiles 'good' and 'average' were within the ranges of 1.50 – 2.49 and 2.50 – 3.49 respectively, 'poor' and 'very poor' were respectively fitted into the ranges of 3.50 – 4.00 and > 4.00. Mention needs to be made here that, the assessment forms also allows for students to make comments about the lecturers they are rating.

3. Results and Discussions

Out of the 160 questionnaires administered, a response rate of 100% was achieved for subsequent analysis. Prior to the analysis of the data, the questionnaire items were inspected for accuracy and formatting, for purposes of entry into Statistical Package for Social Sciences (SPSS). The analyses, presentation and discussion of the results are into three (3) parts: descriptive analysis, test of assumptions and Multivariate Analysis of Variables (MANOVA).

3.1 Data Analysis

Data were analyzed using SPSS version 25.0, for windows. The data analyses were in three (3) parts: descriptive analysis, test of assumptions and MANOVA. Significance level was determined at a probability level of 5%.

3.2 Descriptive Statistics

Descriptive statistics was ran on the various categories that lecturers were assessed and the results are presented below:

Table 1. Summary Statistics of the Dependent Variables

Statistics	General	Method	Knowledge	Material	Availability	Question
Mean	1.74	1.99	1.85	2.2	2.16	1.83
Std. E.M*	0.039	0.04	0.04	0.048	0.047	0.045
Median	2	2	2	2	2	2
Mode	1	2	1	2	2	1
Std. D	0.844	0.874	0.879	1.045	1.028	0.993
Variance	0.713	0.764	0.772	1.093	1.058	0.987
Sum	837	954	887	1057	1037	880

Note. Std. E.M=Standard Error of Mean, Std. D = Standard Deviation*

For the means, a higher mean implies poor performance of lecturers in that category and vice versa. The highest mean recorded is 2.2, which is associated with lecturers linking materials to practical and field application. A mean between two (2) and three (3) means that lecturers were ranked between very good and good on the average in that category. The median is two (2) for all categories, which implies very good. The modal ranks are either one (1) or two (2) for all categories. Considering the sums of assessment figures, categories with low sums

implies the best. Lecturers were ranked best in their general attitude towards work but least in the way they link materials to practical and fieldwork (Table 1).

Table 2. Comparisons of Means

	General		Method		Knowledge		Material		Availability		Questions	
Rank	**Mean**	**Std**	**Mean**	**Std**	**Mean**	**Std**	**Mean**	**Std**	**Mean**	**Std**	**Mean**	**Std**
1	1.61	0.744	1.89	0.839	1.66	0.861	2.08	0.942	2.18	1.00	1.82	0.99
2	1.82	0.964	1.89	0.887	1.86	0.935	2.09	1.06	2.10	1.041	1.68	0.98
3	1.8	0.799	2.18	0.868	2.02	0.805	2.44	1.092	2.21	1.047	2.00	0.991

The mean ranks of the various categories of lecturers assessed by students are presented. Assistant Lecturers had the least performance in all the categories assessed by students since that rank had the largest mean across the different categories. This was followed closely by Lecturers and then Senior Lecturers, indicating that lecturers' ranks differ by their performances (Table 2).

Table 3. Demographic Characteristics

	Age	**Gender**	**Level**	**Department**
Mean	23.39	1.19	2.91	2.13
Std. Error of Mean	0.106	0.018	0.05	0.035
Median	24	1	3	2
Mode	24	1	4	2
Std. Deviation	2.321	0.396	1.104	0.757
Variance	5.386	0.157	1.22	0.573
Skewness	-0.063	1.555	-0.358	-0.212
Std. E. S*	0.111	0.111	0.111	0.111
Kurtosis	-0.317	0.418	-1.365	-1.229
Std. E.K*	0.222	0.222	0.222	0.222
Minimum	18	1	1	1
Maximum	29	2	4	3

Std. E. S= Standard Error of Skewness, Std. E.K*= Standard Error of Kurtosis*

The mean age is 23.39 but the median and the modal age of the respondents are both 24. The minimum and maximum ages of respondents are 18 and 29 respectively. The ages of respondents are left-skewed, meaning that majority of the respondents have ages greater than the mean age (Table 3).

3.3 Tests of Assumptions

Pre-analysis screening procedures for examining multivariate assumptions (normality, outliers, multicollinearity and Homogeneity of Covariance Matrices) were carried out. Details of the findings are discussed below.

On checking for Homogeneity of Covariance, the box's M test was adopted. Box's M test (also called Box's Test for Equivalence of Covariance Matrices) is a parametric test used to compare variation in multivariate samples. More specifically, it checks to find out whether two or more covariance matrices are homogeneous.

Table 4. Test for Homogeneity of Covariance in Ranks

Box's Test of Equality of Covariance Matrices	
Box's M	86.1690
F	2.0150
df1	42.0000
df2	675485.4220
Sig.	0.0000

With a sig. value of 0.000, it can be concluded that the assumption of homogeneity of covariance has been defeated across the ranks (Table 4).

Test was also conducted to check for normality of residuals of the dependent variables and the result is presented below:

Table 5. Test for normality of residuals of the dependent variables

Dependent Variables	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
General	.234	480	.000	.841	480.000	
Method	.198	480	.000	.908	480.000	
Knowledge	.184	480	.000	.889	480.000	
Material	.179	480	.000	.926	480.000	
Availability	.193	480	.000	.888	480.000	
Questions	.228	480	.000	.850	480.000	

The data collected are not normally distributed in all the categories. The test reported a sig. value of 0.0000 in all categories, which implies students' responses in the assessment of their lecturers under all the various sub-headings are not normally distributed (Table 5). This non-normality condition is possibly due to skewness in the responses of students towards the ranks of lecturers.

The assumption of multicollinearity was also checked. Multicollinearity is the undesirable situation where one independent variable is a linear function of other independent variables (Ibrahim et al., 2018). In other words, multicollinearity relates to correlation matrix, and it occurs when predicted variables are highly (0.9 and above) correlated (Davis, F. D., 1989 cited in Ibrahim et al., 2018). The results for the test of the multicollinearity are presented below:

Table 6. Multicollinearity Statistics

		General	Method	Knowledge	Material	Availability	Question
	R Squared	0.425					
General	Tolerance		0.458	0.536	0.497	0.549	0.596
	VIF		2.182	1.867	2.013	1.820	1.678
	R Squared	0.568					
Method	Tolerance	0.610		0.547	0.529	0.597	0.596
	VIF	1.639		1.827	1.889	1.675	1.745
	R Squared	0.484					
Knowledge	Tolerance	0.597	0.480		0.519	0.524	0.609
	VIF	1.675	2.084		1.928	1.908	1.643
	R Squared	0.504					
Material	Tolerance	0.575	0.476	0.539		0.557	0.598
	VIF	1.739	2.101	1.857		1.795	1.673
	R Squared	0.477					
Availability	Tolerance	0.604	0.437	0.517	0.529		0.672
	VIF	1.656	2.289	1.936	1.891		1.489
	R Squared	0.406					
Question	Tolerance	0.577	0.434	0.529	0.500	0.592	
	VIF	1.733	2.303	1.891	1.999	1.689	

The Variance Inflation Factor (VIF) has the maximum value of 2.3 (Table 3), which is far below 10.0. VIF of 10 and above indicate that there is multicollinearity (Ibrahim et al., 2018). Since all the VIF values are far below 10.0 and the Tolerance readings are reasonable, it means that the study do not have multicollinearity issues, among the various categories under which lecturers were assessed by students.

Test for Equality of Variances in Performance was also conducted and the following results (Table 7) were arrived at.

Table 7. Test for Equality of Variances in Performance

Levene's Test of Equality of Error Variances				
	F	**df1**	**df2**	**Sig.**
General	2.76	2	477	0.064
Method	0.103	2	477	0.902
Knowledge	3.356	2	477	0.036
Material	4.54	2	477	0.011
Availability	0.268	2	477	0.765
Question	0.288	2	477	0.75

Only 'knowledge' and 'material' had sig values less than 0.05 (Table 7). This means they are the only two categories, under which the Levene's test for homogeneity is significant, which is an indication that variances are not equal between these categories. However, the levene's test proved insignificant in the other categories, indicating that the assumption of equal variances across groups holds for these categories under which the lecturers were assessed by students.

3.4 Multivariate Analysis

Multivariate Analysis of Variance was employed in this study. MANOVA is a procedure for comparing multivariate sample means and it is used when there are two or more dependent variables. MANOVA was therefore used because data obtained comprises three (3) categorical variables (ranks of lecturers) grouped under Senior lecturers, Lecturers and Assistant Lecturers and six (6) dependent variables (General, Method, Knowledge, Material, Availability and Question) that are independent. The result of the MANOVA is presented below:

Table 8. Multivariate Test for Ranks

	Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Obs. Power
Intercept	Pilai's Trace	0.881	580.124	6	472	0.0000	0.881	1.000
	Wilks' Lambda	0.119	580.124	6	472	0.0000	0.881	1.000
	Hotelling's Trace	7.374	580.124	6	472	0.0000	0.881	1.000
	Roy's Largest Root	7.374	580.124	6	472	0.0000	0.881	1.000
Rank	Pilai's Trace	0.087	3.583	12	946	0.0000	0.043	0.9980
	Wilks' Lambda	0.915	3.577	12	944	0.0000	0.043	0.9980
	Hotelling's Trace	0.091	3.571	12	942	0.0000	0.044	0.9980
	Roy's Largest Root	0.052	4.123	6	473	0.0000	0.050	0.9770

The multivariate test showed a significant effect for the rank of a lecturer as it reported the Pillai's lambda to be 0.087, F=3.583, P<0.05, partial eta squared=0.043, the power to detect the effects = 0.9980. The Hotelling-Lawley's test was also computed at p<0.05, hence the null hypothesis is rejected at 5% significance level and conclude that the performance of a lecturer in the various categories is significantly dependent on the rank of the lecturer (Table 8).

Test for univariate effect for general, method, knowledge, material, availability and questions, given the significance of the entire test was carried out and the results are presented below.

Table 9. Univariate Table

Dependent Variable		Df	F	Sig	Partial Eta Squared	Power Obs.
General	Contrast	2	2.943	0.054	0.012	0.572
	Error	477				
Method	Contrast	2	6.022	**0.003**	0.025	0.882
	Error	477				
Knowledge	Contrast	2	6.766	**0.001**	0.028	0.918
	Error	477				
Material	Contrast	2	6.569	**0.002**	0.0027	0.909
	Error	477				
Availability	Contrast	2	0.450	0.638	0.002	0.123
	Error	477				
Questions	Contrast	2	4.200	**0.016**	0.017	0.737
	Error	477				

Categories with sig. values less than 0.05 indicate that the ranks of lecturers are significant factors that affect their performance (Table 9). In other words, the rank of a lecturer is a significant factor that affects his or her performance in terms of method of lecturing, knowledge on course content, materials and the rate at which they allow students to ask questions and contribute to class discussions.

The mean performance difference was also checked (Appendix) since the multivariate test revealed that the performance of lecturers is significantly different across ranks. The mean of the ranks of lecturers were compared in a pairwise format across all categories to determine which mean differences are significant. Significant mean differences are associated with sig. values less than 0.05 and the confidence interval is either between two (2) positive or negative real numbers. In terms of the availability of lecturers for consultation outside the confines of the lecture hall, the mean differences are not significant across all ranks. However, the test largely reveals that the differences emanated were between the Senior Lecturers and the Lecturers' ranks.

Table 10. Marginal Means Estimated

Dependent Variable	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
General	1.744	0.038	1.668	1.819
Method	1.988	0.039	1.910	2.065
Knowledge	1.848	0.040	1.770	1.926
Material	2.202	0.047	2.109	2.295
Availability	2.160	0.047	2.068	2.253
Question	1.833	0.045	1.745	1.922

3.5 Bootstrapping

The idea behind bootstrapping is that inference about a population from sample data can be modeled by resampling the sampled data and performing inference about a sample from the resampled data. The study's interest was to find out about the students' perception of the impact of lecturers' ranks on their performance. However, all students could not have been captured under this study. Hence a sample was made as a representation of all students of the Faculty. The mean performance of the ranks of lecturers revealed that the empirical results and the bootstrapping performed showed similar results meaning there were no biasness in the data obtained and therefore, violation of some of the assumptions were not sensitive enough so as to negatively affect the findings of the study.

Table 11. Comparison of Bootstrap and Empirical Results

	Mean			Standard Error			Confidence Interval			
Dependent Variable	Empirical	Bootstrap	Bias	Empirical	Bootstrap	Bias	Emp. Upper	Emp. lower	B. Upper	B. Lower
General	1.74	1.74	0.00	.039	0.04	0.00	1.668	1.819	1.680	1.840
Method	1.99	1.99	0.00	.040	0.04	0.00	1.91	2.065	1.9	2.05
Knowledge	1.85	1.85	0.00	.040	0.04	0.00	1.77	1.926	1.76	1.93
Material	2.2	2.20	0.00	.048	0.05	0.00	2.109	2.295	2.11	2.29
Availability	2.16	2.16	0.00	.047	0.05	0.00	2.068	2.253	2.06	2.26
Questions	1.83	1.83	0.00	.045	0.00	-0.01	1.745	1.922	1.73	1.93

The results from table 10 was compared to that of the bootstrap results in table 11 and the results revealed the presence of no biasness in the data because there were no differences in the results obtained. This means that those assumptions that were not met, as per the data collected, were not sensitive and therefore, did not significantly affect the findings.

4. Conclusion

This study sought to examine the impact of lecturers' ranks on their performance. Drawing on the results of this study, this paper concludes that lecturers' performance varies directly with their ranks. This also means that there are significant difference among lecturers' performance and their ranks and that the model used for the study was generally sensitive and hence fit for the study.

Lecturers should be encouraged and motivated accordingly, to perform as required by the requirements of their ranks, for improved quality of teaching and learning. Further, in-house training and conferences should be regularly organized for lecturers, as this will help in equipping them with relevant pedagogical skills and up-to-date research techniques in order to keep them relevant in their profession.

The study was limited to descriptive and inferential statistics, and to the FMS with respective to the setting. More empirical studies are therefore, needed to be conducted using other approaches and to cover the other Faculties and Schools of the University, as this will ensure the generalizability of the findings. Future research could also examine other factors – other than lecturers' ranks - that affect lecturers' performance within the context of the HIL.

References

Agyedu, G. O., Donkor, F., & Obeng, S. (2007). *Research Methods.* Kumasi, Ghana: Jam Publishers.

Benjamin, C. Y. (2011). A Case Study of Student Evaluation of Teaching in University. *International Education Studies, 4*(1), 44-50. Retrieved from https://files.eric.ed.gov/fulltext/EJ1066372.pdf.

Bernard, F. (1997). Knowledge expectations in teaching. *South African Journal for Higher Education 11(1),* 79-84.

Cahn, S. (1996). *Saints and Scamp: Ethice in Academia.* Totowa, NJ: Rowman & Littlefield.

Chua, L. C., & Raymond, K. K. (nd). Students' Evaluation on Teaching Performance of Teacher Education Lecturers. 1-15. Retrieved from http://www1.curtin.edu.my/tl2015/tl2013/PDF/Students%E2%80%99%20Evaluation%20on%20Teaching%20Performance%20of%20Teacher%20Education%20Lecturers.pdf

Engku, S. E., Hishamuddin, S. Z., Zailani, J., & Mohd, A. M. (2015). Lecturer's Gender and Their Valuation of Student Evaluation of Teaching. *International Education Studies, 8*(6), 132-141. https://doi.org/10.5539/ies.v8n6p132

Ibrahim, A., Mavis, A.-G., & Bawa, A. K. (2018). Factors Affecting the Adoption of ICT by Administrators in the University for Development Studies Tamale: Empirical Evidence from the UTAUT Model. *International Journal of Sustainability Management and Information Technologies*, 1-9. Vol. 4, No. 1, 2018, pp. 1-9. http://dx.doi.org/10.11648/j.ijsmit.20180401.11

Liile, L. L., & Anass, B. (nd). Student Evaluation of Teaching (SET): a tool for quality assurance in. 1-7. Retrieved from https://www.cetl.hku.hk/conference2010/pdf/Lekena.pdf

Machingambi, S., & Wadesango, N. (2011). Causes and Structural Effects of Student Absenteeism: A Case Study of Three South African Universities. *Jounal of Social Science, 26*(2), 89-97. Retrieved from

https://pdfs.semanticscholar.org/c546/f3538e6e55de7395e5084964bdf3b2a38246.pdf

Richmond, E. (2003). Looking at Good Teaching. Education Evaluation. 48-59. http://dx.doi.org/10.5539/ies.v8n6p132

Wachtel, H. (1998). Student Evaluation of College Teaching Effectiveness; A Brief Review. *Assessment and Evaluation in Higher Education, 23*(2), 191-210. https://doi.org/10.1080/0260293980230207

Yahya, S., & Norah, M. N. (2012). Students' Perception on Good Lecturer Based on Lecturer. *Procedia - Social and Behavioral Sciences, 56*, 783-790. Retrieved from https://core.ac.uk/download/pdf/82769828.pdf

Appendix

Post Hoc Test in Ranks

Multiple Comparison (LSD)							
	Rank (I)	**Rank (J)**	**Mean Diff (I-J)**	**Std Error**	**Sig**	**95% Confidence Interval**	
						Lower Bound	Upper Bound
General	SL	L	-.21*	0.094	0.029	-0.39	-0.02
		AL	-.19*	0.094	0.047	-0.37	0.00
	L	SL	.21*	0.094	0.029	0.02	0.39
		SL	0.02	0.094	0.842	-0.17	0.20
	AL	SL	.19*	0.094	0.047	0	0.37
		L	-0.02	0.094	0.842	-0.2	0.17
Method	SL	L	-0.01	0.097	0.948	-0.18	0.18
		AL	-.29*	0.097	0.003	-0.48	-0.1
	L	SL	0.01	0.097	0.948	-0.18	0.2
		SL	-.29*	0.097	0.003	-0.48	-0.1
	AL	SL	.29*	0.097	0.003	0.1	0.48
		L	.29*	0.097	0.003	0.1	0.48
Knowledge	SL	L	-.20*	0.097	0.04	-0.39	-0.01
		AL	-.36*	0.097	0	-0.55	-0.17
	L	SL	.20*	0.097	0.04	0.01	0.39
		SL	-0.16	0.097	0.108	-0.35	0.03
	AL	SL	.36*	0.097	0	0.17	0.55
		L	0.16	0.097	0.108	-0.03	0.35
Material	SL	L	-0.01	0.116	0.914	-0.24	0.21
		AL	-.37*	0.116	0.002	-0.6	-0.14
	L	SL	0.01	0.116	0.914	-0.21	0.24
		SL	-.36*	0.116	0.002	-0.58	-0.13
	AL	SL	.37*	0.116	0.002	0.14	0.6
		L	.36*	0.116	0.002	0.13	0.58
Availability	SL	L	0.08	0.115	0.515	-0.15	0.3
		AL	-0.03	0.115	0.786	-0.26	0.19
	L	SL	-0.08	0.115	0.515	-0.3	0.15
		SL	-0.11	0.115	0.356	-0.33	0.12
	AL	SL	0.03	0.115	0.786	-0.19	0.26
Multiple Comparison (LSD)							
	Rank (I)	Rank (J)	Mean Diff (I-J)	Std Error	Sig	95% Confidence Interval	
		L	0.11	0.115	0.356	-0.12	0.33
Question	SL	L	0.14	0.11	0.213	-0.08	0.35
		AL	-0.18	0.11	0.101	-0.4	0.04
	L	SL	-0.14	0.11	0.213	-0.35	0.08
		SL	-0.32*	0.11	0.004	-0.54	-0.1
	AL	SL	0.18	0.11	0.101	-0.04	0.4
		L	.32*	0.11	0.004	0.1	0.54
Based on observed means* The mean difference is sig. at 0.05% level							

SL=Senior Lecturer, L= Lecturer and AS = Assistant Lecturer

The sign "*" = mean difference are significant.