ASSESSMENT FACTORS INFLUENCING STUDENTS' ACADEMIC ACHIEVEMENT

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ABSTRACT

Education stands as bridge that leads people out of poverty into prosperity. In order to evaluate the improvement as well as individual students' performance, the student assessment must be performed in a very technical manner, which proposes additional actions for advancement of teaching, learning and distribute information by appropriate participants. The study in particular endeavored to determine the assessment factor influencing students' academic achievement in relation to summative assessment, formative assessment and assessment strategies from lecturers, predominantly adopted for assessment in higher education. Thereby, a study was conducted at Freetown Polytechnic College in Sierra Leone, in which simple random sampling technique was used (so that every lecturer has an equal opportunity of been selected) to select sample size of 150 lecturers from 437 lecturers in the college for the research. The researcher summarizes related literature reviews of both national and international investigations for secondary data and structured questionnaire was utilized for primary data collection. Two research objectives were raised with three hypotheses, for objective one, reliability statistics, descriptive statistics and multiple regression analysis were used to test hypothesis at 0.05 level of significant. While objective two was analyzed using frequency table with percentage. Furthermore, the study explained various connections between quality and effectiveness in education, discloses the frame work of student accomplishment at school. Findings revealed that, summative assessment is the most important assessment that can influence students' academic achievement, followed by formative assessment while assessment strategies from lecturers influenced students negatively. It was suggested that more emphasis must be placed on assessment, seating accommodation and semester syllabus coverage by lecturers. It was concluded that summative assessment is the main assessment that can be apply to determine students' academic achievement. The study un-factored the utilization of accumulated student evaluation outcomes towards achieving judgments in regard to teacher, students and schools performance along with education organizations.

Keywords: Formative assessment; Summative assessment; Academic achievement; Assessment strategies from lecturers.

INTRODUCTION

Assessment is a critical criterion for determining student's academic accomplishment in higher education, because the advancement of students in higher education focuses mainly on assessment which has been the heart of higher education, Basera (2019). Assessments are crucial in higher education because they can inspire learners' attitudes and behaviors towards learning. It provides them with the feedback they need about their strengths and weaknesses, also with an insight on how to improve in the future, (Morgan & Neal, 2011; Chan, 1996) emphasis that,

assessment is a process that consists of activities used for the evaluation of the powers and limitations of students' learning besides teaching activities, in addition taking appropriate decision for planning an effective teaching activities. Formative assessment and summative assessment are the tools which are frequently utilized for evaluating, students' knowledge of different experience of a national standard. The collection of information for enlightening student learning undergoes the formative assessment. Whereas summative assessment utilizes information collected in formative assessment, to know the content in which student can learn or reserved in the stages of learning process (American Educational Research Association, American Psychological Association, & the National Council on Measurement in Education [AERA, APA & NCME], 2014). According to Hattie (1996), assessment attains mainly two critical purposes: a) to stipulate information on students' existing heights of accomplishment and b) the teachers must deliver in classrooms for ensuring student progress towards the anticipated conclusions. It also gives the lecturer an opportunity to review the effectiveness of the evaluation strategies used, assess the learner's understanding of certain concepts learned, and enable the lecturer to self-assess his or her abilities, (Hau et al., 2020). It is important to note that, assessments have at least three conditions to satisfy within the learning process: a). They have to be faithful to the curriculum; b). They must support the concept that disturbed in education with approximately degree of abstraction, generalization or allocation and c) Non-obstruction of students' appointment in preparation of communities, rather to reassure behaviors connected through virtuous learning, (Entwistle, 1996). According to Martin (2008), assessments or evaluations are used to structure strategies lecturers used to improve each level of the education system. The trainer also has the right to check whether the learning goals are being achieved, (Zou, 2008). In other words, the main goal of assessment is to encourage students' learning and development, not just considering grades.

The Context of Student Achievement at School

According to Barber & Mourshed (2007), the factors influencing students' academic achievement varies at different levels. At students' level it comprises of gender, place of living, socio-economic status, motivation and learning, which is connected to infrastructure, size of school, location, and configuration of students in the school and at teacher heights its includes professional training, teaching method, teaching experience and motivation. In this manner, quality tutoring must be deciphered if instruction simultaneously fulfills the models of adequacy, effectiveness and value. Therefore, research suggests that training is to be integrated into entrepreneurship and other business school's curriculum, like the School of Business and Management as a guideline before starting their study, (Fitria, 2018). This implies that we can examine quality showing practices if they address adequacy, efficiency and worth; therefore educational effectiveness typically means the connection among results and education aims. Students' assessment is a critical aspect of teaching and learning process, whether teaching at undergraduate or graduate level, it is important for instructors to strategically evaluate the effectiveness of their teaching by measuring the extent to which students in the classroom are learning the course material. The understanding of students learning through assessment is important because it provides useful feedback to both instructors and students about the extent to which students are successfully meeting the course learning objective (Basera, 2019).

LITERATURE REVIEW

Assessment includes all activities that the teacher performs to collect data about the learner. Therefore, during the learning process, the trainer collects data on the effectiveness of its delivery and the learner's ability to master the knowledge learned, (Hanna & Dettmer, 2004). The vital characteristics of elevated-conditions are related to the consequences of evaluation on motivation of students, for the purpose of learning and the establishment of response towards guidance in learning (DeMong et al., 1994). Assessment can be in the form of diagnostic, summative or formative. In order to distinguish capabilities earlier in the direction of training is diagnostic assessment. Whereas summative assessment is evaluation of students in terms of grades at the end of a learning program, or taking conclusions approximately for the development and certification, while provision of responses in addition to the direction of the students, throughout the learning process is formative assessment, (Bloom et al., 1971; Ramsden, 1992).

Academic Achievement

Academic achievement is the capability towards validates students' achievement through the attainment of intended conclusions (Kitsantas et al., 2017). Various researchers highlight the influence of psychological and intellectual capabilities on the aspect of academic achievement. Nevertheless, experiencing elevated brainpower unguaranteed the academic achievement, as well as personalities ought for conscious in its learning patterns (Kim et al., 2017). Schools are still underfunded, inefficient, and student learning is constrained by short teaching hours, teacher absenteeism, and lack of measurement and accountability (Zimbroff & Jorgensen, 2019). Consequently, the strategies of learning are the learning styles utilized by students in accomplishing, evaluating, and suppressing its recently developed experience (Barua et al., 2015). In addition, it was observed that, successful institutions are constantly creating and disseminating new knowledge and rapidly applying it to new technologies and products (Tajpour & Hosseini, 2021).

Summative Assessment

Unlike formative assessments, the high-level-stakes assessments are associated for further utilization for obtaining the definitive assessment to get knowledge in how much learning took place or the maximum learning a student got (Gardner, 2010). It's additionally determined the appropriateness in a particular assessment-based plans, especially gifted and talented education towards evaluate whether to proceed with the next education stage of a student, or offering career guidance, considering experiences instead of awards (Harlen & Gardner, 2010). For instance, if a student performance has reached an elevated level in a particular subject then formal learning on the evaluated subject is not required after summative assessment, except in the case of a cumulative final examination. In accordance with National Research Council (2001), in the classroom, the summative assessments don't give students the choice to validate theoretical consideration, rather gives students the prospect to contemplate judgmentally to understand underneath original circumstances to resolve original difficulties or elucidate innovative singularities. As in the case of demonstrating the problem-solving analysis through the critical process of thinking, summative assessment should comprise either multiple-choice question, or the protracted rejoinder matters, Common Core Standards, (2014). Additional joint

category of summative assessment is Performance-based assessment, that incorporates the activity based on certain level or opportunity through students for critical analysis of learning of knowledge, National Research Council (2001); such as Product-assessments for attaining the outcome of tangible pointers, of acquaintance that are similar to ending products. Generally, the significant benefit of this approach includes a). It allows the comparing of students' performance across different population on different educational purposes and requirements. b). It provides consistent information utilized on behalf of the principles of accountability in different levels (e.g., Classroom, Schools, Colleges, Universities, District, National and State) and various stakeholders (e.g., Students, Teachers, Administrators) along with c). It can give information feedbacks to educational policy (e.g., Curriculum or Funding decisions), (V.J Shute, D. Zapata-Rivera, 2010). However, summative assessment indicates the customary methodology used to evaluate educational endings, which includes utilizing assessment data for aggregate functions, like sponsorship, certification in addition to award of a degree and so on.

Formative Assessment

Formative assessment is an "exercises embraced by educators and understudies for surveying themselves and give information that can be utilized as input to adjust instructing and learning exercises" (Black & William, 2010). Generally Formative assessment occur in two significant structures: These are unconstrained and arranged. Unconstrained Formative assessment are ill-equipped, for example, (a) when an educator peruses an error in the non-verbal communication of an understudies during a class meeting and inquiries the understudy about her arrangement, (b) when an instructor ask an understudy to give an illustration of an idea just covered, or (c) when question-and-answer meetings are directed during an exercise. Arranged Formative assessment incorporate extraordinary exercises, for example, tests and task practices that are regulated to evaluate understudy advancement. As indicated by Wiggins (1998), "The objective of developmental evaluation is fundamentally to instruct and foster understudy execution, not simply to review it". Instructors noticed the significance of assisting understudies with a sense of security to face challenges and commit errors in the classroom, such understudies are bound to uncover what they do and don't comprehend. During these scenes, educators ought to give input and revision to the understudies as an approach to remediate understudies' work OECD, (2002). Dark & William (1998), in their investigation on classroom based formative assessment uncovered that, the accomplishment gains through Formative assessment were among the biggest at any point announced for instructive mediations. It additionally affirmed that, formative assessment strategies are especially compelling for lower accomplishing understudies; consequently, diminishing disparity of understudy results and raising accomplishment, (Natriello, 1987; Crooks, 1988). As per Cornelius (2013), leave ticket is an illustration of formative assessment approach, it worries about the educator posing inquiries to the understudies by the day's end that differ in difficulties, the understudies will compose the appropriate response and submit to the instructor as they leave the classroom. The composed reaction is their leave ticket (Wylie et al., 2009). The following day the instructor will talk about the arrangements with the understudies by framing gatherings and designate understudies with solid handle of the idea as gathering pioneers. The instructor oversees the conversations to guarantee that understudies comprehend the idea being educated. Leave ticket assists the instructor with understanding the current level of the understudies.

Assessment Strategy

The main purpose of planning assessment for students is to enhance the assessment value through continuous monitoring for effortless understand as well as analysis for teachers and students; besides instructionally beneficial to guide subsequent decision making (Harlen, 2007). Assessments should be design in order to fit the intended purpose, which will help to ensure students' validity, reliability, transparency and usability. Legitimacy identifies with the politeness of surmising uses and results appended to appraisal. An exceptionally legitimate appraisal guarantees that all important parts of understudy execution are covered by the evaluation. Dependability refers to the degree to which the appraisal is predictable in apportioning what it sets to quantify. An exceptionally dependable appraisal guarantees that the evaluation is exact and not affected by the specific assessor or appraisal event. Straight forwardness identifies with how much data is accessible in regard to anticipated learning results, the rules that will be utilized in passing judgment on understudy learning and the principles being applied when decisions are made about learning. Faculty and staff, under the guidance of their academic director, organize lectures through the Zoom application, and combine online tools to keep students busy (Gangwani & Alfryan, 2020). Ease of use refers to how strategy creators, school pioneers, instructors, guardians and understudies sort out and react to appraisal results. Past research reveals that there are series of problems need not to be skipped during the implementation of an evaluation schedule, primarily and for most, evaluation plan should have adequate funding and accurately assigned for different assessment events. Martell (2007) confirms an addition of resources of fivefold that in supportive for reaching the assessment of learning requirements, including greater percentage of the properties allocated for exterior faculty training. Second, the resistance of faculty to assessment continues to bring great consideration in constructing an achievable evaluation plan (Pringle & Michel, 2007).

SIGNIFICANCE OF THE STUDY

No single appraisal can assess varieties activities in the student learning aspect; instead one mechanism encounters the entirety on objectives carried out through guardians, experts, besides policymakers. Assessments must be rigorous as thorough as those of the leading training countries as well as the degree of performance they anticipate, the practice is based on clear norms and standards, which has been necessary in both countries (Kozakov, 2021). Therefore, the significance is to note assessments superior in documenting the capability of student in the work they conduct and perform. For this reason, assessments possibility must be offered to deliver clues, as to know why students think the way they do and how they are learning as well as the reasons for misunderstandings Gordon Commission, (2013)

RESEARCH GAP

Assessment tends towards the vital aspect to determine the achievements of students' academic achievement. Currently, numbers of specific variables have impacted the effectiveness of evaluation in higher institutions of learning. The prominent ones are unbalanced increase of students enrollment in connection to the institution resources availability, Educators are largely overwhelmed by the workloads of the institutions, the frequency of formative assessment has been limited and it is mostly carried out poorly not thinking of the learning outcomes or assessed frequently with no validity. Due to larger number of students' enrollment, pressure and

depression that exist within the institutions had made the standard of assessment to decline, which lead to declining of students' academic achievement. Because of these, the institutions cannot identify the appropriate assessment that can effectively balance between assessment and academic achievement. In order to balance both, the administration needs to identify the most appropriate method among summative assessment, formative assessment and assessment strategies from lecturers to adopt for their students evaluation.

OBJECTIVES OF THE STUDY

1. To investigate which factor among the factors (formative assessment, summative assessment and assessment strategies from lecturers) that mostly influences students' academic achievement.

Hypotheses for Objective One

H_1: *A positive influence among summative assessment in addition to achievements of students' academics.*

H_2: *A positive influence among formative assessment in addition to achievements of students' academics.*

H_3: *A positive influence among assessment strategies in addition to achievements of students' academics.*

2. To examine what should present in an education environment for students' academic achievement.

RESEARCH METHODOLOGY

The study explores to know which of the factor will be more reliable for assessing students. Variables collected from past literatures were used to develop structured questionnaire that consist of two sections. The first section, demographic data which include gender, status, qualification, and work experience and second section has 20 statements and one suggestion question use to rate the perception of lecturers on assessment for academic achievement. The statements were based on assessment strategies from lecturers, formative assessment, summative assessment and academic achievement. Likert scale was used as research tool towards measuring the agreement level of respondents on each statement from: "5" as "strongly agrees" to "1" as "strongly disagree"

Data Collection and Sampling Procedure

The researcher used a structured questionnaire as a research tool to collect primary data "because the data can be collected relatively quickly even the researcher is not present when the questionnaires were completed" and related literature reviews were reviewed for secondary data collection "to know what other researchers have done in the related field". The researcher used simple random sampling technique (so that every lecturer has an equal opportunity of been selected) to select 150 lecturers for the research.

Data Analysis

Research objective one was analyze by employing reliability statistics, descriptive statistics and multiple regression analysis to test the hypotheses at 0.05 level of significant and frequency table with percentages was used to analyze objective two (Table 1).

RESULTS

Objective One

To investigate which factor among the factors (formative assessment, summative assessment and assessment strategies from lecturers) that mostly influences students' academic achievement.

Hypotheses

H_1: *A positive influence among summative assessment in addition to achievements of students' academics.*

H_2: *A positive influence among formative assessment in addition to achievements of students' academics.*

H_3: *A positive influence among assessment strategies in addition to achievements of students' academics.*

TABLE 1 RELIABILITY STATISTICS	
Cronbach's Alpha	**N of Items**
0.746	15

TABLE 2 DESCRIPTIVE STATISTICS			
Predictors	**Mean**	**Std. Deviation**	**N**
Academic achievement	3.8973	0.44676	150
Summative assessment	4.2137	0.47299	150
Formative assessment	4.0307	0.53832	150
Assessment strategies from lecturers	3.7352	0.56936	150

Descriptive statistics represent the means and standard deviations of the predictors. This shows that the deviation between the mean and standard deviation of each factor are closely related, in conjunction to deviation between the factors integrated towards means and standard deviations. This implies that the respondents agreed that the variables affect the students' academic achievement (Table 2).

Analysis and interpretation

Students' academic achievement was measured with formative assessment, summative assessment and assessment strategies from lecturers.

Multiple regression analysis was used because "it is a reliable method of identifying which factor among the factors(Summative assessment, Formative assessment and Assessment strategies) that has the greatest influence, matters most, which one can be ignored besides the independency rate of variables that impact with one other".

Regression analyses comprise model summary, ANOVA and Coefficient

TABLE 3
MODEL SUMMARY OF REGRESSION ANALYSIS

Model	R	R Square	Adjusted R Square	Std Error of Estimate
1	0.069[a]	0.005	-0.016	0.45023

a). Predictors: (constant). Summative assessment, formative assessment, and Assessment strategies from lecturers. B). Dependent variable: Academic achievement.

Results in Table 3 shows that "R" determine the quality of the prediction in dependent variable, its value is 0.069 indicate good prediction level. "R^2" value of 0.005 shows the variability of the dependent variable that can be clarified through independent variables. Nevertheless, "Adjusted R^2" indicates variance percentage in the academic achievement, expounded through independent variables. Further, adjusted R^2 has reached -0.016, which specifies the accountancy of independents variables as -1% in the students' academic accomplishment of the variance. Meaning there is negative variation between the independent variables.

TABLE 4
ANOVAA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.143	3	0.048	0.236	0.871[b]
Residual	29.595	146	0.203		
Total	29.739	149			

a. Dependent Variable: Academic achievement
b. Predictors: (Constant), Assessment strategies from lecturers, Summative assessment, Formative assessment

Considering the Table 4, the analysis made with the variance (ANOVA) indicates that the numerous sum totals of squares and the degree of freedom are correlated among every individual. As per the two individual values obtained, the mean square is achieved through division at the sum of squares with the correlated degree of freedom. However, the key aspect from the tabulation is F-ratio. To the given information, the value of F is 0.236 remains inconsequential by the side of p-value <0.05, because the tabulation determined the F-ratio sig. value is 0.871 tends to be superior in comparison to 0.05 point of significant, meaning model fit the data well.

TABLE 5
DEMONSTRATES THE OUTCOME OF MULTIPLE REGRESSION ANALYSIS (COEFFICIENTS')

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**		
	(Constant)	3.694	0.370	-	9.986	0.000
	Summative assessment	0.062	0.089	0.066	0.696	0.488
1	Formative assessment	0.017	0.081	0.020	0.207	0.836
	Assessment strategy from lecturers	-0.034	0.075	-0.044	-0.457	0.648
a. Dependent Variable: Academic achievement						

Coefficient and hypothesis testing

Table 5 shows the influence of summative assessment, formative assessment and assessment strategies from the lecturers on students' academic achievement in Freetown Polytechnic Colleges. The unstandardized coefficient regression model indicated the strength of the influence of the variables that are unbiased in respective with the determined variable, keeping all additional variables continuous.

Follows the regression equation as

$$AA = a + SAx1 + FAx2 + ASx3 \qquad (1)$$

Where: AA= Academic achievement, SA = Summative assessment, FA = Formative assessment, AS= Assessment strategies from lecturers and a = Constant.

From the B values

$$AA=3.694 +0.062(SA)+0.017(FA)-0.034(AS) \qquad (2)$$

Equation (2) indicates that if summative assessment changes by one unit, there will be .062 unit increases in the students' academic achievement, when all other variables are kept constant as represented in table 6."B" in the unstandardized coefficients shows positive for summative assessment and formative assessment but negative for assessment strategies from lecturers. This shows a direct relationship of summative assessment and formative assessment but indirect relationship for assessment strategies from lecturers for students' academic achievement in Freetown Polytechnic College.

The model shows that summative assessment causes 6% positive variation in students' academic achievement with an insignificant t- value of 0.696, so we accepted H_1 hypothesis illustrating among the summative assessment as well as student academic accomplishment, creating a positive impact over it. Formative assessment causes 1% deviation towards the academic achievement except the positive path in developing the t- value of 0.207 unimportant, hence accepted H_2 hypotheses demonstrating the positive outcome among the affect under formative assessment as well as student academic accomplishment. An assessment strategy from lecturers causes 3% variation among academic achievement of student but through opposite direction or negative direction with t- value of -0.457 is also insignificant, so we rejected H_3 hypothesis which states that there is a positive influence between assessment strategies from lecturers and students' academic achievement.

The t-value for each regression coefficient in the model is to assess whether summative assessment, formative assessment and assessment strategies from lecturers are significant predictors of the students' academic achievement. The results of t-value confirm that summative assessment (t=0.696; P=0.488>0.05); formative assessment (t=0.207, p=0.836 >0.05) and assessment strategies from lecturers (t=-0.457, p=0.648 >0.05), are unimportant at the point of 0.05 due to p-values are superior in comparison to 0.05.

The results of beta value (β) in Table 5 indicate the influence of summative assessment, formative assessment and assessment strategies from lecturers. It can be inferred that summative assessment (β=0.066) have the highest influence on students' academic achievement, followed by formative assessment (β=0.020) while assessment strategies from lecturers (β=-0.044) has a negative influence on the students' academic achievement.

Objective Two

To examine what should present in an education environment for students' academic achievement.

SUGGESTIONS GIVEN FOR THE OPEN ENDED QUESTION

The Table 6 shows the frequencies and percentages given by the lecturers, as suggestions as how they want the college to function. Out of the 150 respondents, 145 lecturers gave their suggestions for effective students' academic achievement.

No	Suggestions(N=145 Respondents)	Frequency	Percent	Valid Percent	Cumulative Percent
	TABLE 6 **FREQUENCY TABLE, THE SUGGESTIONS OF 145 LECTURERS.**				
1	There should be an established time for any exams.	7	4.82	4.82	4.82
2	The lack of enough seating accommodation during the exams should be address.	31	21.38	21.38	26.2
3	The internet facility in the college need to be improves.	11	7.59	7.59	33.79
4	The college administration should make sure that lecturers cover the syllabus at the end of each semester.	28	19.31	19.31	53.1
5	Questions should be vet by head of department before submission to the exams office	15	10.35	10.35	63.45
6	Assessment should be the most important activity in the college because it determines the college standard	37	25.52	25.52	88.97
7	The relationship between the lecturers and the students should be properly monitored by the college authority.	16	11.03	11.03	100
	Total	145	100	100	-

According to suggestions in Table 6 above, lecturers who suggested that assessment should be the most important activity in the college are in the majority (25.52%). Followed by those who said the problem of seating accommodation during the exams should be address 21.38%, next lecturers that emphasized on the college administration to ensure that lecturers cover the syllabus at the end of each semester 19.31%. Other suggestions were, the relationship between lecturers and students should be monitored by the college authority 11.03%, questions should be vetted by heads of department before submission to the exams office 10.35%, the improvement of internet facility in the college 7.59% and there should be an established time for any exams 4.82%. However, it was observed that the most important suggestions confirmed by the lecturers were, standard assessment, seating accommodation and syllabus coverage by lecturers. Therefore it can be confirmed that, standard assessment, enough seating accommodation and complete syllabus coverage are to be assured in an education environment for students' academic achievement.

DISCUSSION

The study was conducted to explore the most effective factors that influenced students' academic achievement; the survey was conducted in Freetown Polytechnic College in Sierra Leone. It was hypothesized to check the influence of summative assessment, formative assessment and assessment strategies from lecturers on students' academic achievement. By using appropriate statistical tools, it was found that summative assessment, formative assessment and assessment strategies from lecturers are factors that influence students' academic achievement. Two hypotheses are accepted, and one hypothesis is rejected. Summative assessment and formative assessment demonstrate on students' academic accomplishment with positive affect coupled with assessment approaches shows a negative influence on students' academic achievement. It is indicated that summative assessment is most important factor that influenced students' academic achievement next by formative assessment. But assessment strategies from lecturers influenced students' academic achievement negatively.

Majority of the respondents suggested that in order to run the college effectively, more attention should be given in assessment followed by seating accommodation during exams, authority ensures lecturers' completion of the syllabus for each semester, monitor cordiality between the students and lecturers, all questions should be vet by heads of department and there should be good internet facility in the college.

FINDINGS

1. The deviation between the mean and standard deviation for each and among factors are closely related, meaning the academic achievement is affected the factors.
2. The Adjusted R shows a negative variation between the independent variables
3. The F- ratio in the ANOVA is not significant at p-value 0.05 because F- sig. is 0.871 obtained superior values with a factor of 0.05 degree of significant; therefore the suggestion can be taken into consideration. Hence the model fit the data well.
4. The equation shows that if summative assessment changes by one unit, there will be 0.062 unit increase in the students' academic achievement. AA = 3.694 + 0,062(SA) + 0,017(FA) – 0.034(AS).
5. There was a positive coefficient and direct relationship of summative assessment and formative assessment with students' academic achievement in polytechnic colleges.
6. Hypotheses H_1 and H_2 of summative and formative assessment were accepted, but we find no way of accepting H_3 of assessment strategies from lecturers.
7. In multiple regression table, the t-value confirmed that, summative, formative assessment and assessment strategies from lecturers are not significant at 0.05 level because their p-values are greater than 0.05.
8. The outcome of beta inferred regarding summative assessment (β=0.066) have the highest influence on students' academic achievement, next by formative assessment (β = 0.020) while assessment strategies from lecturers (β= -0.044) reaches negative impact towards students' academic achievement.
9. Also, the greatest importance suggestions given by the respondents for increasing students' academic achievement were given more priority to assessment, seating accommodation and syllabus coverage.

CONCLUSION

Students' academic achievement can be improved if the administration put more emphasis on summative assessment for the assessment of their students, because it is the final assessment that is conducted at the end of any educational program for an award of a certificate or degree; this is in support of (Bloom, Hastings & Madaus, 1971; Ramsden, 1992). Key factors which were suggested affecting assessment should be taken into consideration, so that the intended purpose for assessment is achievement; it was also confirmed by (Kitsantas A et al., 2017). With the support of multiple regression analysis, the associations among academic accomplishment with its numerous considerations are quantified; further, there exists a constructive significant association including academic accomplishment. It can be undoubtedly said that summative assessment is the most influencing assessment tool for students' academic achievement, this is in support of (Hau NH et al., 2020). Finally, the limitations of this study are: firstly all the respondents are from a polytechnic college in Sierra Leone. Secondly the study analyzed the influence of specific variables on students' academic achievement, other variables such as family income, communication, learning facilities, proper guidance can be use. Thirdly, the sample size taken for the study was small that is only 150, if a larger sample size is used to carry out the same study the result might be improved than existing study.

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