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PEDAGOGICAL STRATEGIES AND ACADEMIC ACHIEVEMENT OF STUDENTS IN PUBLIC UNIVERSITIES IN UGANDA

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Abstract

Purpose: This study analysed the relationship between pedagogical strategies and academic achievement of students in public universities in Uganda. Specifically, the study analysed the relationship between student-centred, teacher-centred and teacher-student pedagogical strategies with academic achievement of students.

Methodology: The study adopted a correlational design and data were collected using a questionnaire on a sample of 383. Quality control of data was ensured by carrying out Confirmatory Factor Analysis and calculating Cronbach's alpha. Data analysis involved descriptive and inferential analyses.

Findings: Regression results revealed that the student-centred strategy had a positive and significant influence on academic achievement of students but the teacher-centred and teacher-student interaction strategies did not. Therefore, the student-centred pedagogical strategy is essential for academic achievement of students, the teacher-centred pedagogical strategy is less affective teaching strategy for academic achievement of students and the teacher-student pedagogical strategy is not the most important teaching strategy for academic achievement of students.

Contribution to policy, practice and policy: The study suggests that lecturers in the universities should prioritise the student-centred pedagogical strategy when teaching students, should give least priority to teacher-centred pedagogical strategy when teaching students, and should not over prioritise the teacher-student pedagogical strategy when carrying teaching of students.

Key Words: *Academic achievement, Pedagogical strategies, Student-centred, Teacher-centred, Teacher-student Interaction.*

1.0 INTRODUCTION

Academic achievement refers to performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college or university (Mimrot, 2016). Pickard (2007) indicates that academic achievement is a multidimensional concept referring to factual, conceptual, procedural and meta-cognitive knowledge achievement. Factual knowledge refers to the discrete facts and

basic elements that experts use when communicating about their discipline, understanding it, and organising it systematically (Watts & Hogdson, 2019). Conceptual knowledge refers to students' ability to explain the concepts in their own words and transfer information to new situations (Pickard, 2007). Procedural knowledge refers to mastery of the criteria of when to use various procedures and reflects knowledge of different process (Hailikari, Katajavuori & Lindblom-Ylänne, 2008). Meta-cognitive knowledge refers to awareness of the learning process by the learner and the ability to adapt to challenges that occur during this process through effective strategies (Orlando, 2016). Students' academic achievement is important as far as work place performance is concerned one they have graduated. This is because academic achievement is associated with a combination of cognitive skills (technical knowledge, expertise and abilities), and personal or behavioural characteristics (principles, attitudes, values & motives), which are a function of an individual's personality (Hodges & Burchell, 2003).

Graduates with high academic achievement have work knowledge, skills, are able to apply knowledge gained to work situations, desire to learn more and understand subject matter (Cardoso, Ferreira, Abrantes, Seabra & Costa, 2011). Therefore, successful work performance is dependent on academic achievement. If initially graduates who have attained high academic achievement are recruited they should be able to quickly acquire the relevant (technical) knowledge and skills in order to attain their employers' performance objectives (Hodges & Burchell, 2003). Owing to the importance of academic achievement, there have been concerns about factors learners' education and achievement for a long time (Ebanks, 2010). For instance, Grimes and AllinSmith (1961) reported that the choice of instructional methods and taking into account of the personality of the pupils determined academic achievement. Reporting on influences of academic achievement in a comparison of results from Uganda and more industrialised societies, Heyneman (1979) made two observations. First, the relationship between socio-economic status and academic achievement was weaker in less industrialized societies. Two, schools in less industrial societies had stronger effects on cognitive achievement than one would expect given the data from industrialized societies. Geringer (2005) reporting on the educational experience of Southern and Eastern European immigrants from 1894-1926 paralleling it with that of the years 1960-1988 found out that the family demographics of gender expectations and socioeconomic status significantly contributed to academic achievement. Abrantes, Seabra and Lages (2007) in a study on how pedagogical methods affected learning performance of students revealed that pedagogical methods in terms of student-instructor interaction had a positive significant impact on student's learning performance.

Cardoso et al. (2011) reported that teacher-student interaction directly and positively influenced student-student interaction and directly and positively influenced academic achievement. Asoodeh, Asoodeh and Zarepour (2012) found out that the student-centred learning approach was successful and effectual as a technique for teaching. On the other hand, Lancaster (2017) established that incorporating alternative learning environment programs and a student-centred classroom environment promoted independence and leadership skills and higher academic achievement. Zhao, Valcke, Desoete, Sang and Zhu (2014) revealed that teacher-centred teaching had a positive impact on students' performance. Precisely, the studies above suggest that factors that relate to academic achievement include instructional strategies (Abrantes et al., 2007; Asoodeh et al. 2012; Cardoso et al., 2011; Zhao et al., 2014), personality of the pupils (Grimes & AllinSmith, 1961), socio-economic status (Geringer, 2005; Heyneman, 1979) and

demographics of gender expectations (Geringer, 2005). However, empirical gaps emerge from the studies above. For instance, whereas all the other scholars emphasised the significance of the student centred and teacher-student interactional approaches, China et al. (2014) reported that teacher-centred teaching had a positive impact on students' performance. This empirical gap made it imperative for this study to investigate the relationship between pedagogical strategies and academic achievement.

2.0 LITERATURE REVIEW

2.1 Theoretical Review.

The Cognitive Constructivist Theory, The behavioural Learning Theory and Attachment Theory were the basis for this study. The cognitive constructivist theory indicates that knowledge is something that individuals actively construct through a series of intellectual stages (Cholewinski, 2009). Learning takes place through the use prior experiences and knowledge (Shapira-Lishchinsky, 2014). Constructivist pedagogy involves active learning, contextual learning, construction of meanings, prior knowledge use, motivation of learners, authority sharing, learning facilitation and group learning (Cholewinski, 2009; Olusegun, 2015; Richardson, 2003). The cognitive constructivist theory thus suggests a student centred strategy in which learning involves active involvement, contextual learning, construction of meanings, prior knowledge use, motivation of learners, authority sharing, learning facilitation and group learning. On the other hand, the Behavioural Learning Theory posits that learning is the product of the stimulus conditions (S) and the responses (R). Therefore, to modify people's attitudes and responses, there is need to either alter the stimulus conditions in the environment or change what happens after a response occurs (Ormrod, 2004).

The assumption of the Behaviourist Theory is that observable behaviour indicates whether or not the learner has learned something. Therefore, learners should be given immediate feedback, tested to determine whether or not they have achieved the learning outcome and carry out repeat practice with feedback. Also stimulus-response associations should be strengthened through instructional cues, practice and reinforcement (Alzaghoul, 2012; Ertmer & Newby, 2013). The Behaviourist Theory shows that the work of the teacher is to change the behaviour of the learner using measures such as immediate feedback, testing, continuous practice/ revision, instructional cues and reinforcement. Therefore, Behaviourist Theory suggests the use of the teacher centred approach to teaching. With the Attachment Theory, it suggests that people are predisposed to form attachment relationships from which they can experience security and comfort. Secure attachments allow individuals to develop trust in others and self-reliance in themselves. Securely attached individuals with positive expectations of self and others approach life with confidence (Bowlby, 2007). Secure students are optimistic about coping with stress and are likely to relate better with others, have greater capacity for concentration and cooperation and are more confident and resilient (Fleming, 2008). The Attachment Theory proposes the use of the teacher-student pedagogical strategy by which teachers develop relationships with students to facilitate academic achievement. The above three theories were thus the basis relating pedagogical strategies and academic achievement of students.

2.2 Empirical Review

2.1.1 Student-Centred Strategy and Academic Achievement of Students.

Different scholars (e.g. Andersen & Andersen, 2017; Asoodeh, Asoodeh & Zarepour, 2012; Ayaz & Sekerci, 2015; Cheang, 2009; Cornelius-White; 2007; Ganyaupfu, 2013; Lak, Soleimani & Parvaneh, 2017; López, Bertomeu, Chornet, Olmedo & Félix, 2014; Tebabal & Kahssay, 2011) have related student-centred strategy and academic achievement of students. For instance, Andersen and Andersen (2017) carried out a study on student-centred instruction and academic achievement using students in secondary schools in Denmark. The findings revealed that student-centred instructional strategy had a negative impact on academic achievement in general. Asoodeh et al. (2012) in an investigation of the effects of student-centred learning approach on academic achievement and social skills in elementary schools in South Khorasan in Iran reported that student centred approach was successful and effectual as a technique toward teaching pupils. In a meta-analysis, Ayaz and Sekerci (2015) on the effects of the student centred approach on students' academic achievement reported that the student centred approach had positive effects on the student's academic achievement. Cheang (2009) in an assessment of the learner-centred approach to students at the Virginia Commonwealth University (VCU) School of Pharmacy in the USA revealed that compared to baseline, students' intrinsic goal orientation control of learning beliefs, self-efficacy, critical thinking, and meta-cognitive self-regulation improved after taking the course.

Cornelius-White (2007) in a meta-analysis on learner-centred teacher-student relationships found out that learner-centred teacher approach encouraged thinking and learning and had positive student outcomes on critical thinking, satisfaction, math achievement, drop-out prevention, self-esteem, verbal achievement, positive motivation, social connection, IQ, grades, reduction in disruptive behaviour, attendance, and perceived achievement. Ganyaupfu (2013) in an investigation on the differential effectiveness of teaching methods on students' academic performance established that the teacher-student interactive method was the most effective teaching method, followed by student-centred method while the teacher-centred approach was the least effective teaching method. Lak et al. (2017) revealed learner-centred instruction was more effective than teacher centred instruction in improving performance. López et al. (2014) indicated that student centred approaches namely; expository methodology, questions, problem solving, development of a monograph, laboratory practices and team work led to significant improvements in learning strategies and academic performance. Tebabal and Kahssay (2011) reported that student-centred instruction significantly improved students graphical interpretation skill and conceptual understanding. The literature above showed that scholars above had made significant effort to relate student-centred strategy and academic achievement of students. However, empirical gaps emerged with the study by Andersen and Andersen (2017) producing controversial findings because whereas all the other studies concurred that the student centred strategy related to academic achievement, this study revealed that student-centred instructional strategy had a negative impact on academic achievement in general. This gap made it imperative for this proposed study to test the hypothesis to the effect that:

H1: There is a relationship between the student-centred strategy and academic achievement.

2.1.2 Teacher-Centred Strategy and Academic Achievement of Students.

Several scholars (e.g. Andala & Ng'umbi, 2016; Ganyaupfu, 2013; Lak et al., 2017; Napoles & MacLeod, 2016; Oskouei & Saemian, 2012; Ottman, 2007; Zohrabi, Torabi & Baybourdiani, 2012) have related teacher-centred strategy to academic achievement of students. For example, Andala and Ng'umbi (2016) in an experiment designed to test how teaching methods related to the academic performance in universities revealed that the traditional lecture method (teacher centred approach) was the least beneficial teaching approach in determining students' academic achievement. Ganyaupfu (2013) in a study on the differential effectiveness of teaching methods on students' academic performance demonstrated that the teacher-centred approach was the least effective teaching method. Lak et al. (2017) investigating the effect of teacher-centred method versus learner-centred method on learners performance with learners revealed that learner-centred and teacher-centred groups had positive results on the improvement of learners' performance. Napoles and MacLeod (2016) while examining how teacher delivery, student engagement, and observation focus influenced teaching effectiveness found out that lessons with high teacher delivery with a view of the teacher were the most effective than lessons with low teacher delivery. Oskouei and Saemian (2012) in a comparison of student-centred and teacher-centred teaching approaches revealed that the average of the students receiving student-based instruction was higher than the other students.

Relatedly, Ottman (2007) compared the effects of student-directed presentation and traditional teacher centred presentation on learning using senior-level high school statistics classes. The results revealed that both groups showed significant improvement under both instructional approaches, but showed no significant differences gained by a particular instructional method. On their part, Zohrabi et al. (2012) compared the use of learner-centred approach compared to teacher-centred approach using high school students. Experimental results showed that implementation of teacher-centred process led to higher academic achievement. While the studies above reveal that scholars have expended significant effort to relate teacher-centred strategy and academic achievement of students, empirical gaps emerged with scholars producing contradicting results. For instance, whereas the studies (e.g. Lak et al., 2017; Napoles & MacLeod, 2016; Oskouei & Saemian, 2012; Ottman, 2007; Zohrabi et al. 2012) indicated that the teacher-centred strategy had a positive effect on academic achievement, studies (e.g. Ng'umbi, 2016; Ganyaupfu, 2013) indicated that had the least and negative effect on academic achievement of students. This empirical gap made it necessary for this study to investigate the hypothesis to the effect that:

H2: There is a relationship between the teacher-centred strategy and academic achievement.

2.1.3 Teacher-student pedagogical strategy and Academic Achievement.

Scholars (e.g. Allen, Pianta, Gregory, Mikami, & Lun, 2011; Allen et al., 2013; Andala & Ng'umbi, 2016; Ayaz et al., 2013; Granot, 2014; Lee, 2012; Roorda, Koomen, Spilt & Oort, 2011) have studied the relationship between teacher-student pedagogical strategy and academic achievement. Allen et al. (2011) in a study on an interaction-based approach to enhancing secondary school instruction and student achievement revealed that interaction-based approach produced substantial gains in measured student achievement in the year following its completion. Accordingly, the achievement was equivalent to moving the average student from the 50th to the 59th percentile in achievement test scores. Further, Allen et al. (2013) in a multilevel modelling

used secondary school students Virginia State. The findings revealed that classrooms characterized by a positive emotional climate, with sensitivity to adolescent needs and perspectives, use of diverse and engaging instructional learning formats, and a focus on analysis and problem solving were associated with higher levels of student achievement. Andala and Ng'umbi (2016) testing how teaching methods related to the academic performance in universities found out that interactive lecture method was a major determinant of students' academic achievement. Ayaz et al. (2013) in an investigation on the impact of student-teacher relationship on academic achievements at secondary level revealed a positive significant correlation between students' marks and students-teachers relationship dimensions of connectivity, connectivity, availability and communication.

On the other hand, Granot (2014) assessed the contribution of teacher-student relationships to the explanation of student school adaptation with Israeli homeroom teachers and their students as units of analysis. The findings revealed that children in the secure teacher-student attachment-like group showed lower levels of behaviour problems (externalising, internalising), difficulties in learning self-regulation, higher levels of frustration tolerance, task orientation, popularity among peers, and better academic achievement than did the children in the insecure teacher-student attachment-like group. Lee (2012) while examining relationships between students' perceptions of the school social environment and student outcomes showed that supportive teacher-student relationships predicted of performance. Roorda et al. (2011) in a meta-analytic analysis found positive a statistically significant association between positive teacher-student relationships and academic achievement with stronger effects found in the higher grades. The studies above suggest that scholars have made effort to examine the relationship between teacher-student pedagogical strategy and academic achievement. However, the studies raised contextual gaps. Other than the study by Andala and Ng'umbi (2016) carried out in the context of a developing country in Africa, all the studies (e.g. Allen et al., 2011; Allen et al., 2013; Lee, 2012) biased towards the Western World context while the studies (e.g. Ayaz et al., 2013; Granot; 2014) were done in Asia. These gaps made it essential in the context of Uganda for this study to analyse the hypothesis to the effect that:

H3: There is a relationship between the teacher-student pedagogical strategy and academic achievement.

3.0 METHODOLOGY

Sample and procedure. The sample comprised 383 students from two universities that were Makerere and Kyambogo in South Western Uganda. To attain the sample size, the researcher used two-stage sampling whereby in the first stage, the students were clustered according to the universities. In stage two, the students were stratified according to faculties and from each university one faculty that is the faculty of Education were selected. This was because the faculties of Education were considered to have been keen to pedagogical strategies since they trained teachers. Thus, students from the College of Education and External studies Makerere University and faculty of education Kyambogo were studied. The respondents were drawn from the sampled population using simple random sampling.

Instrument. The study adopted a self-administered questionnaire with five sections that were sections A through E. The question items will be close-ended items based on nominal scale with

appropriate alternatives given for section A and ordinal scale based on the five-point Likert from a minimum of 1 through 5 for sections B through E. The questions in section A were on the background characteristics that are namely; gender, age group, year of study, marital status and university. The questions in section B were on the dependent variable and those in sections C through E were on the independent variables. Section B on academic achievement (IVI) covered four aspects that were namely; factual knowledge, conceptual knowledge, procedural knowledge and Meta Cognitive Knowledge achievement. The questions in section C were on the student centred pedagogical strategy. The questions in section D on teacher centred pedagogical strategy and the questions in section teacher-student pedagogical strategy.

Data Quality Control. The validities of multi-item constructs were tested using Principal Component Factor Analysis. In considering construct validity, only items whose first component/ factor had an Eigenvalue that exceeded 1.00 were rotated for interpretation. For items that cross loaded, that is with more than one Eigenvalue exceeding 1.00, hence loading highly on more than one component/ factor, such items were considered complex items and thus identified for dropping from subsequent analysis (Baglin, 2014). Items loading 0.50 or better were considered but cross-loaders, that is items loading 50 or better more than once and those that loaded below 0.50 were removed (Costello & Osborne, 2005). The reliabilities of the constructs were established using Cronbach Alpha method provided by SPSS. The reliabilities were as follows: academic achievement (31 items: $\alpha = 0.934$), student-centred (54 items: $\alpha = 0.940$), teacher-centred (20 items: $\alpha = 0.880$) and teacher-student (29 items: $\alpha = 0.952$).

Data Analysis. The data collected was processed by coding all data questionnaires, entering them into the computer using the Statistical Package for Social Sciences (SPSS), summarising them using frequency tables and editing them to remove errors. Data were analysed at bivariate and multivariate levels. At the bivariate level, the dependent variable (DV), academic achievement was correlated with each of the three pedagogical strategies which were the independent variables (IVs), namely student-centred, teacher-centred and teacher-student. At multivariate level, the DV, was regressed on the three pedagogical strategies (IVs) using multiple regression. The Statistical Package for Social Sciences (SPSS) facilitated the data analysis.

4.0 FINDINGS

4.1 Demographic Characteristics.

The results in Table 1 shows that male students (54.1%) were the larger percentage with the females being 45.9%. The larger percentage (75.0%) were in the age category of 20-25 years, followed by those above 25 years and the remaining 1.0% was in the age category of those below 20 years. The larger percentage (36.8%) were in first year, followed (32.5%) in second year and 30.7% were in third year. Those that were single never married before were 82.0, the married/cohabiting were 16.1% and 1.9% were single but ever married. The larger percentage (53.1%) of the students that provided data was from Makerere University and 46.9% were from Kyambogo University.

Table 1: Respondents' Background Characteristics

Item	Categories	Frequency	Percent
Gender	Male	198	54.1
	Female	168	45.9
	Total	366	100.0
Age Groups	Below 20 years	5	1.0
	20-25 years	269	75.0
	Above 25 years	88	23.7
	Total	372	100.0
Year of Study	Year 1	138	36.8
	Year 2	122	32.5
	Year 3	115	30.7
	Total	375	100.0
Marital Status	Single never married before	300	82.0
	Married/ cohabiting	59	16.1
	Single but ever married	7	1.9
	Total	366	100.0
University	Makerere University	199	53.1
	Kyambogo University	176	46.9
	Total	375	100.0

4.2 Pedagogical Strategies and Academic Achievement of Students.

To establish the relationship between academic achievement and pedagogical strategies that is to test the first three hypotheses (H1-H3) in this study, correlation analysis was done. The three pedagogical strategies were student centred, teacher-centred and teacher-student interaction strategy. The results were given as in Table 2.

The results in Table 2 suggest that all pedagogical strategies namely; student centred ($r = 0.636$, $p = 0.000 < 0.05$), teacher-centred ($r = 0.286$, $p = 0.000 < 0.05$), teacher-centred ($r = 0.658$, $p = 0.000 < 0.05$) and teacher-student interaction strategy ($r = 0.433$, $p = 0.000 < 0.05$) had a positive

and significant relationship with academic achievement. This means that hypotheses (H1-H3) were supported.

Table 2: Correlation of Academic Achievement on Pedagogical Strategies

	Academic Achievement	Student centred Pedagogical Strategy	Teacher centred Pedagogical Strategy	Teacher-Student Interactional Pedagogical Strategy
Academic Achievement	1	0.636**	0.286**	0.658**
Student centred Pedagogical Strategy		1	0.116**	0.222**
Teacher centred Pedagogical Strategy			1	0.252**
Teacher-Student Interactional Pedagogical Strategy				1

***. Correlation is significant at the 0.05 level (2-tailed).*

4.3 Regression Analysis

To find out whether pedagogical strategies predicted academic achievement, at the confirmatory level, to establish whether pedagogical strategies namely; student centred, teacher-centred and teacher-student interaction strategies influenced academic achievement, a regression analysis was carried out. The results were as in Table 4.3.

Table 4.3: Regression of Academic Achievement on Pedagogical Strategies

Teacher-student pedagogical Strategy	Standardised Coefficients (β)	Significance (p)
Student-centred	0.509	0.000
Teacher-centred	0.019	0.802
Teacher-student interaction strategy	0.214	0.073

Adjusted $R^2 = 0.498$

$F = 67.892, p = 0.000$

Dependent Variable: Academic Achievement

The results in Table 3, show that pedagogical strategies namely; student centred, teacher-centred and teacher-student interaction strategies influenced academic achievement explained 49.8% of the variation in academic achievement of students (adjusted $R^2 = 0.498$). This means that 50.2% of the variation was accounted for by other factors not considered under this model. However, only the student-centred strategy ($\beta = 0.509, p = 0.000 < 0.05$) had a positive and significant

influence on academic achievement of students. On the other hand, teacher-centred ($\beta = 0.019$, $p = 0.802 > 0.05$) and teacher-student interaction strategies ($\beta = 0.214$, $p = 0.073 > 0.05$) had a positive but insignificant influence on academic achievement. This means that only the hypothesis one (H_1) was supported but hypotheses two and three (H_2 & H_3) were not.

4.4 Discussion

Student-Centred Strategy and Academic Achievement. The first hypothesis was to the effect that there is a relationship between the student-centred strategy and academic achievement was derived. Regression test results revealed that there is a positive significant relationship between the student-centred strategy and academic achievement. Hence the hypothesis was supported. This finding is consistent with the findings of most previous scholars. For instance, Asoodeh et al. (2012) showed that student centred approach was successful and effectual as a technique toward teaching pupils. Likewise, Ayaz and Sekerci (2015) revealed that constructivist learning approach (student-centred approach) had positive effects on the student's academic achievement. Also, Cheang (2009) revealed that students responded positively to the learner-centred approach. Similarly, Cornelius-White (2007) reported that learner-centred teacher variables namely non-directivity, empathy, warmth and encouraging thinking and learning had above-average associations with positive student outcomes on critical thinking, satisfaction, math achievement, drop-out prevention, self-esteem, verbal achievement, positive motivation, social connection, IQ, grades, reduction in disruptive behaviour, attendance, and perceived achievement.

In agreement with the finding of the study, Ganyaupfu (2013) reported that the student-centred was an effective teaching method. In the same vein, Lak et al. (2017) indicated that the learner-centred instruction was more effective than teacher centred instruction in improving performance. Also, López et al. (2014) revealed that student centred approaches namely; expository methodology, questions, problem solving, development of a monograph, laboratory practices and team work lead to significant improvements in learning strategies and academic performance. Further, Tebabal and Kahssay (2011) revealed that student-centred instruction significantly in improved students graphical interpretation skill and conceptual understanding. Scholars above have made significant effort to relate student-centred strategy and academic achievement of students. However, contextual and empirical gaps emerge. However, the finding of the study was inconsistent with the finding by Andersen and Andersen (2017) who revealed that student-centred instructional strategy had a negative impact on academic achievement in general. Nevertheless, with the finding of the study consistent with the findings of the previous scholars, this means that the student-centred approach has a positive and significant relationship with academic achievement of students.

Teacher-centred Strategy and Academic Achievement. The second hypothesis was that there is a relationship between the teacher-centred strategy and academic achievement of student. However, regression test results showed that there was appositive but insignificant relationship between teacher-centred strategy and academic achievement of students. Therefore, the hypothesis was rejected. This finding agrees with the findings of some previous scholars. For example, Andala and Ng'umbi (2016) revealed that the traditional lecture method (teacher centred approach) was the least beneficial teaching approach in determining students' academic achievement. Similarly, Ganyaupfu (2013) found out that that the teacher-centred approach was the least effective teaching method.

However, the finding disagrees with the findings of most of the previous scholars. For instance, Lak et al. (2017) revealed that learner-centred and teacher-centred groups had positive results on the improvement of learners' performance. On their part, Napoles and MacLeod (2016) indicated that lessons with high teacher delivery with a view of the teacher were the most effective than lessons with low teacher delivery. On their part, Ottman (2007) revealed that both student-directed presentation and traditional teacher centred presentation led to significant improvement in academic achievement of students and there were no significant differences gained students taught using a particular instructional method. Further, Zohrabi et al. (2012) reported that implementation of teacher-centred process led to higher academic achievement. Owing to the fact that the finding of the study disagreed with the findings of most scholars but agreed with the findings of some scholars, the findings indicate that the significance of the teacher-centred is shrouded in controversy.

Teacher-Student Strategy and Academic Achievement of Students. The third hypothesis conjectured that there is a relationship between the teacher-student strategy and academic achievement of students. However, regression test results showed that teacher-student pedagogical strategy had a positive but insignificant relationship with academic achievement of students. This means that the hypothesis was rejected. However, this finding is inconsistent with the findings of previous scholars. For instance, Allen et al. (2011) revealed that interaction-based approach produced substantial gains in measuring student achievement. Also, Allen et al. (2013) reported that classrooms characterised by a positive emotional climate, with sensitivity to adolescent needs and perspectives, use of diverse and engaging instructional learning formats, and a focus on analysis and problem solving were associated with higher levels of student achievement. Likewise, Andala and Ng'umbi (2016) found out that interactive lecture method was a major determinant of students' academic achievement. Similarly, Ayaz et al. (2013) revealed a positive significant correlation between students' marks and students-teachers relationship dimensions of connectivity, availability and communication.

Also, Granot (2014) indicated that children in the secure teacher-student attachment-like group showed lower levels of behaviour problems (externalising, internalising), difficulties in learning self-regulation, higher levels of frustration tolerance, task orientation, popularity among peers, and better academic achievement than did the children in the insecure teacher-student attachment-like group. Lee (2012) revealed that supportive teacher-student relationships predicted performance. Similarly, Roorda et al. (2011) reported that there was a positive statistically significant association between positive teacher-student relationships and academic achievement with stronger effects found in the higher grades. Nevertheless, the effects of negative relationships were stronger in primary than in secondary school. With the findings of the study inconsistent with the findings of the previous scholars, this means that in the context of the current study, it was different which calls for further research.

5.0 CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This study concludes that the student-centred pedagogical strategy is essential for academic achievement of students. It is also concluded teacher-centred pedagogical strategy is less affective teaching strategy for academic achievement of students and the teacher-student

pedagogical strategy is not the most important teaching strategy for academic achievement of students.

5.2 Recommendation

The study recommended that lecturers in the universities should prioritise the student-centred pedagogical strategy when teaching students. However, lecturers in universities should give least priority to teacher-centred pedagogical strategy when teaching students. In addition, lecturers in universities should not over prioritise the teacher-student pedagogical strategy when carrying out teaching of students.

5.3 Limitations and Areas for Future Research

This study makes significant contributions regarding how to use the different pedagogical strategies to promote academic achievement of students. However, a number of limitations emerged from this study. First, the findings of the study on teacher-student pedagogical strategy contradicted the findings made by all previous scholars by indicating that it had an insignificant relationship with academic achievement at confirmatory level. This finding calls for further research to clarify the importance of the variable in predicting academic achievement of students. Besides, the study was based on data collected from students from only two public universities. This suggests that the generalisation of the research findings to all universities should be considered with care. Therefore, future studies should make effort to carry similar or related studies on a larger number of universities including private universities.

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