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Original Article

## Student-Centred Pedagogical Strategies and Academic Achievement of Students at Kyambogo and Makerere Universities

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**Keywords:**

Active Learning,  
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Learning  
Facilitation.

The study investigated the relationship between student-centred pedagogical strategies and academic achievement at Kyambogo and Makerere universities. Data on a sample of 375 students was obtained using a questionnaire following the cross-sectional research design. Quantitative data were analysed using correlation and regression analyses. All student-centred pedagogical strategies were positively and strongly correlated with academic achievement. Nevertheless, all of the regression analysis outcomes—except those for learning facilitation, active learning, and authority sharing—were in line with the correlational results. According to the study's findings, lecturers should prioritize group learning, contextual learning, and student motivation over active learning, authority sharing, and learning facilitation. It was recommended that lecturers focus more on group learning, contextual learning, and learner motivation rather than active learning, authority sharing, and learning facilitation.

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## INTRODUCTION

Since the early 1950s, there has been an increase in concerns about students' academic achievement (Ebanks, 2010). Gaffield (1994) notes that since the 1960s, parents, educators, and politicians in the United States and Canada have had challenges understanding how their kids typically performed academically on international science and mathematics tests. It should be noted that cognitive qualities (technical knowledge, competence, and abilities) and psychological or behavioural traits (principles, attitudes, values, and motivations) are linked to academic achievement. However, anecdotal data from observers of Uganda's public university graduates points to low academic achievement. For example, according to Wamala et al. (2013), most students enrolled in the Bachelor of Laws program at Makerere University's School of Law had a median cumulative grade point average of 3.16, which is second-class lower.

Similarly, Wamala et al. (2013) found that the Bachelor of Science in Actuarial Science program at Makerere University also had low academic achievement, with most graduates achieving an overall median CGPA (3.28; a range of 2.52-4.56). Most graduates demonstrate limited acquisition of subject-specific abilities and techniques, appropriate procedures, as well as acquisition of strategic knowledge, mental tasks, and self-knowledge. They also demonstrate limited learning of subject-specific classifications, principles, theories, models, and structures. The graduates also lack the skills necessary for success in the competitive and ever-changing knowledge industry. Many graduates lack the required basic workplace concepts taught at universities, making them illiterate (Kanyeihamba, 2015). Evidence shows that Uganda in the East African Community has the worst track record for graduates without marketable skills, with a rate of 63%. The graduates are uninformed about the current events in their fields of study and lack adequate expertise in their academic subjects. Most graduates struggle with communication, creativity, and

English language proficiency (Munishi, 2016). The aforementioned contextual information demonstrates that many Ugandan university students struggle with poor academic achievement rates. This study investigated whether lecturers in universities tried to employ student-centred pedagogical strategies/approaches to enhance students' academic achievement.

## Objectives of the study

- To establish the relationship between active learning and academic achievement of students at Kyambogo and Makerere Universities.
- To find out the relationship between contextual learning and academic achievement of students at Kyambogo and Makerere Universities.
- To determine the relationship between motivation of Learners and academic achievement of students at Kyambogo and Makerere Universities.
- To establish the relationship between authority Sharing and academic achievement of students at Kyambogo and Makerere Universities.
- To find out the relationship between learning facilitation and academic achievement of students at Kyambogo and Makerere Universities.
- To determine the relationship between group learning and academic achievement of students at Kyambogo and Makerere Universities.

## Hypotheses of the Study

- There is a relationship between active learning and academic achievement.
- There is a relationship between contextual learning and academic achievement.
- There is a relationship between motivation of learners and academic achievement.

- There is a relationship between authority sharing and academic achievement.
- There is a relationship between learning facilitation and academic achievement.
- There is a relationship between group learning and academic achievement.

## REVIEW OF RELATED LITERATURE

### Active Learning and Academic Achievement

By actively participating in the learning process, students can concentrate on building knowledge while developing skills like analytical thinking, problem-solving, and meta-cognitive activities that advance students' thinking (Medina et al., 2017). Scholars have investigated the link between active learning and academic success (e.g., Fayombo, 2012; Prince, 2004). For instance, Fayombo (2012) used undergraduate psychology students at the University of the West Indies, Barbados, in the eastern Caribbeans, to study the connection between active learning strategies and students' learning outcomes. The findings showed statistically significant positive relationships between student learning outcomes and active learning practices.

In a review, Prince (2004) evaluated data supporting the benefits of active learning. The review found that if brief exercises were included in the lecture, students would retain more information. The literature mentioned above demonstrates that researchers have attempted to link active learning and student academic achievement. All research, except for the study by Fayombo (2012), identified methodological inadequacies. Due to this vacuum, primary research was needed in Ugandan institutions to understand the connection between active learning and students' academic achievement better.

### Contextual Learning and Academic Achievement of Students

A learning technique known as contextual teaching and learning emphasizes the complete process of student involvement to locate the

content taught and relate it to real-life circumstances that motivate students to apply it. According to Lotulung et al. (2018), contextual teaching and learning promote students' connections between their knowledge and its application in their daily lives when teachers present real-world scenarios in the classroom. Contextual learning and teaching have become a cutting-edge instructional method that, aims at assisting students in connecting what they are learning to their everyday contexts. Thus, contextual learning/teaching allows students to process information by placing it in their daily lives, which helps them acquire new knowledge (Kosassy et al., 2018).

Danis et al. (2017) analysed the impact of the contextual teaching and learning approach, and their findings showed that the contextual learning model impacted student achievement. Similarly, Hasanah et al.'s (2019) findings demonstrated a considerable impact of contextual teaching and learning on students' cognitive learning success in biology at senior high schools in Indonesia. Additionally, research by Kosassy et al. (2018) revealed that contextual learning improved students' learning outcomes.

Furthermore, Nasreen et al. (2018) studied how contextual learning affected medical students at the University of Lahore in Pakistan's ability to retain information. The findings of both sessions were analysed using a student t-test. The findings indicated that students taught using a case-stimulated methodology outperformed those taught using a traditional methodology in the examination. Suparman et al. (2013) used students from secondary schools in Keruak, Indonesia, to study the impact of a contextual teaching and learning strategy and achievement motivation on students' English writing proficiency. According to the study's findings, pupils taught writing utilizing contextual teaching and learning methodologies greatly outperformed better than those taught using traditional methods. This study investigated the connection between contextual learning and academic achievement in the context of Ugandan students.

## **The Motivation of Learners and Academic Achievement of Students**

According to Sukor et al. (2017), motivation is the desire and incentive of an individual to engage in a particular activity. The cognitive and motor processes by which initial desires and wishes are chosen, prioritized, operationalized, and (successfully or unsuccessfully) carried out are initiated, directed, coordinated, amplified, terminated, and evaluated by a person's dynamically changing cumulative arousal (Solak, 2012). As an internalized process of development derived from the individual's experiences, perceptions, and interpretations, motivation is the cognitive and affective force that originates, sustains, and guides engagement behaviours (Wood, 2019). Engagement in an activity due to intrinsic satisfaction or enjoyment is called intrinsic motivation (Legault, 2016).

Extrinsic motivation is pursuing an instrumental purpose or reward, whereas intrinsic motivation is acting for its own sake (Reiss, 2012). Students who are motivated by external factors only take actions that result in distinct desired outcomes. According to Thoonen et al. (2011), intrinsically motivated behaviours are those that are carried out of interest. Thus, they do not require a reward other than the natural sensation of interest and delight in a task, and they produce high-quality learning. Indeed, by delivering precise, timely, and interesting knowledge relevant to the student's present and future requirements, teachers can impact students' motivation (Williams, 2012). If teachers are to inspire pupils, they will be more motivated to learn, which will lead to their academic success. Evidence shows that academic achievement of students and motivation are related.

For instance, Ferreira et al. (2011) studied the impact of motivation on students' perceived learning. They discovered that motivating factors have a potent influence on student learning. As such, high and low achievers had very different motivations for their academic work.

As all the research was conducted outside of Africa, the literature reviewed above revealed a connection between inspiring students to learn and academic accomplishment.

## **Authority Sharing and Academic Achievement of Students**

When two individuals or groups share authority, responsibility is shared (Döös, 2015). According to Ng et al. (2011), power-sharing encourages students to engage in learning situations actively. Making students accountable for their learning, granting them agency, relaxing restrictions in the classroom, and including them in decision-making about instruction and learning are all aspects of power-sharing (Barch, 2015). To exercise learner authority, students must take ownership of their education, which essentially means giving them power over the learning process (Hashemian & Soureshjani, 2011). Sharing authority facilitates students' freedom and independence in decision-making by allowing them to monitor and evaluate their own progress and accomplishments while achieving their pre-planned goals and keeping track of their learning process (Ahmadi & Izadpanah, 2019).

Academic achievement and authority sharing have been linked in several research. For instance, Judistira and Wijaya (2017) investigated the impact of self-control and self-adjustment on academic achievement in junior high school students in Tasikmalaya, Indonesia. Data analysis revealed a correlation between students' academic success and both self-control and self-adjustment. The results of multiple regression showed that self-control predicted academic success. Kuhnle et al. (2011) study revealed that self-control was a major predictor of classroom achievement. Furthermore, Hashemian and Soureshjani (2011) looked into any connections between the autonomy, motivation, and academic achievement of Persian learners. Their findings showed a significant connection between academic performance and autonomy.

Even though the aforementioned literature demonstrates that some researchers have linked

authority sharing to academic achievement, the research reveals that one factor, autonomy or self-control, was explored. This study, which examined all facets of authority sharing, including holding students accountable for their learning, reducing the number of rules in the classroom, including students in the teaching process, and teaching decision-making to students, was drawn to this disparity.

### **Learning Facilitation and Academic Achievement of Students**

According to Vogrinc and Zuljan (2010), learning facilitation occurs when teachers encourage students to take an active role in their education. When students ask for assistance, teachers can offer to assist them or respond to their requests. This may hinder efficacy because all requests for assistance must come from students themselves. However, Chang (2005) contends that the best facilitation is when the instructor or facilitator starts it for the students. Facilitation boosts interactions, offers extra assistance to suit students' requirements, and encourages cognitive restructuring as they build new information. Better learning results are thought to be strongly related to facilitating cognitive information (Brush & Saye, 2002). Utilizing students' strengths and shortcomings, summarizing for students, providing constructive criticism, periodically assessing group cooperation, and assisting students in applying newly acquired knowledge to new contexts or challenges are all part of Patria's (2015) definition of learning facilitation.

In studies like Chang (2005), the effects of facilitator-initiated plus system-initiated (high-level) facilitation on cognitive restructuring and learning achievement of graduate students in the College of Education at a sizable South-Eastern State University in the USA were compared to those of system-initiated (low-level) facilitation. The findings revealed a strong link between effective facilitation and learning outcomes. Sharma (2016) study examined the impact of teacher support, location, and sex on academic

attainment. The results strongly connected teacher facilitation (support) and academic achievement.

### **Group Learning and Academic Achievement of Students**

Group learning is often referred to as collaborative learning. These teaching and learning practices encourage student participation in small groups of two to five students (Le et al., 2018). Group learning activities are carefully planned learning exercises where students are responsible for their participation, learning, and contribution. Additionally, rewards are given to students who collaborate with others to teach and learn from them (Parveen et al., 2011). Group learning entails more than just cooperating; it also calls for clear roles within the team, team-building exercises, regular meetings, and a value placed on learning (goal orientation). Students are becoming more independent learners arising from collaborative learning (Hernandez, 2012).

Indeed, students who learn together in small groups are more motivated, socially cohesive, and fully develop their cognitive and developmental skills (Reigal-Garrido et al., 2014). According to Karali and Aydemir (2018), effective group learning implementation includes fostering positive independence with group members who can cooperate to achieve something greater than individual accomplishment. Equal participation is also necessary; thus, no student should be permitted to predominate a group socially or academically. Individual accountability must be ensured by evaluating each member's performance, giving the results back to the individual and the group to compare against a performance standard, and holding each member accountable by fellow members for making a fair contribution to the group's success. The simultaneous involvement of group members engaged in productive work is also necessary.

Students who participate in group learning are more likely to participate in actual learning, develop positive attitudes toward others and the subject matter, put forth more effort, and improve their genuine engagement with the subject matter

(Backer et al., 2018). Group learning also gives students tools to boost their confidence and increase interest in harder subjects. According to Cardoso et al. (2011) and Patria (2015), group learning entails setting up study groups, having group discussions, and having students learn from one another to promote interaction. Numerous researchers have connected student academic progress to group learning. For instance, Chandra (2015) looked into the significance of group learning when undergraduate students in India are studying English. According to the findings, collaborative group learning affects student achievement, and there is a substantial difference between undergraduate students' achievement scores utilizing collaborative learning methods and those using individual learning techniques. An examination of correlations found a link between group learning and student academic achievement.

Vrioni's (2011) study revealed that students not only believed cooperative learning improved relationships between students but also created a desire to stay a member, increased group cohesion and a sense of belonging over competitive or individualistic experiences, was a better way to learn communication skills, and made students feel accountable for attending every class and preparing as much as they could. Additionally, group learning improved group cohesion, student commitment to collective objectives, sentiments of individual accountability to the group, perseverance in pursuing goal achievement, and productivity that resulted in academic achievement (Vrioni, 2011, pg. 5). However, the study by Parveen et al. (2011) produced controversial results reporting that cooperative (group) learning was not a better instructional strategy than routine method of instruction. This study in Uganda was motivated by these contextual and empirical limitations to investigate more thoroughly the connection between group learning and the academic achievement of university students.

## **METHODOLOGY**

The section describes the methodology that guided this study. The methodology includes research design, population and sampling, data collection instruments, and data analysis method.

### **Research design**

This study adopted the cross-sectional-research design. The cross-sectional research design was designed by which the whole population or its subset was studied by seeking information about a study problem on what is going on at only one point in time (Olsen & Marie, 2004).

### **Population**

The quantitative aspect was designed to obtain responses representative of the undergraduate students in public universities in Uganda. Thus, all undergraduate students totalling 73,574 distributed in the nine universities in Uganda as of 2017 (National Council for Higher Education [NCHE], 2017) composed the study population.

### **Sample and Procedure**

A sample of 375 respondents from Makerere and Kyambogo Universities in central Uganda made up the sample. The researchers employed two sampling stages to reach the desired sample size, with the first involving clustering the students according to their universities. In stage two, the students were divided into faculties, and the education faculty was chosen from each university. Since they both prepared teachers, the education faculties were thought to be interested in instructional techniques. Thus, participants from the Makerere University College of Education and External Studies and the Kyambogo Faculty of Education were examined. Using basic random sampling, the respondents were chosen from the sampled population.

### **Data collection Instrument**

A self-administered questionnaire was used in the investigation. For section A, the question items were closed-ended on a nominal scale with suitable alternatives and on an ordinal scale using a five-point Likert scale. Factual knowledge,

conceptual knowledge, procedural knowledge, and metacognitive knowledge achievement were the four concepts discussed in Section B on academic achievement. The student-centred pedagogical technique was the concept of the section C questions, broken up into six subsections: active learning, contextual learning, learner motivation, authority sharing, learning facilitation, and group learning.

**Data Analysis**

All data questionnaires were coded and then entered into a computer program called the Statistical Package for Social Sciences (SPSS), where they were summarized using frequency tables and edited to remove inaccuracies. Bivariate and multivariate analyses of the data were performed. Academic achievement was connected with student-centred pedagogies in active learning, contextual learning, learner motivation, authority sharing, learning facilitation, and group learning at the bivariate level. The dependent variable was regressed using multiple regression at the multivariate level on the

six student-centred strategies (I.V.s). The data analysis was done using SPSS.

**RESULTS**

Students' Academic performance was studied as a multi-dimensional concept describing factual knowledge achievement, conceptual knowledge, procedural knowledge, and meta-cognitive knowledge. The measurement scale or the items of the different variables was the five-point Likert scale with code 5 as the maximum and best-case situation (Strongly agree). Code 1 as the worst-case situation (strongly disagree).

The results in Table 1 showed that the academic performance of students was high; that is, factual knowledge achievement ( $M = 4.02$ ), conceptual knowledge achievement ( $M = 4.01$ ), procedural knowledge achievement ( $M = 3.90$ ), and meta-cognitive knowledge achievement ( $M = 4.04$ ). This is because all means were high, close to code 4, which implied agreement (high) on the five-point Likert scale.

**Table 1: Academic performance**

Construct	Mean	Interpretation	Rank
Factual Knowledge Achievement	4.02	High	4
Conceptual knowledge Achievement	4.01	High	4
Procedural Knowledge Achievement	3.9	High	4
Meta-cognitive Knowledge Achievement	4.04	High	4

Student-centred pedagogical strategies were studied in terms of Active learning, Contextual learning, Motivation of Learners, Authority Sharing, Learning Facilitation, and Group Learning. The measurement scale used was the five-point Likert scale. The results in Table 2 showed student pedagogical strategies were good apart from active learning with ( $M = 2.78$ ), with a

mean close to three, suggesting that active learning was fair. Contextual learning had ( $M = 3.94$ ), Motivation of Learners ( $M = 4.06$ ), Authority Sharing ( $M = 3.60$ ), Learning Facilitation ( $M = 3.84$ ) and Group Learning ( $M = 4.32$ ). This is because all means were close to code 4, which implied agreement (high) on the five-point Likert scale.

**Table 2: Student-centred pedagogical strategies**

Construct	Mean	Interpretation	Rank
Active learning	2.78	Moderate	3
Contextual learning	3.94	High	4
Motivation of Learners	4.06	High	4
Authority Sharing	3.6	High	4
Learning Facilitation	3.84	High	4
Group Learning	4.32	High	4

### Student-Centred Strategy and Academic Achievement of Students

The six components of student-centred learning were divided into six sub-hypotheses (H1-H6), and correlation analysis was done to determine whether there was a relationship between academic success (A.A.) and student-centred

pedagogical technique. There is a connection between active learning (A.L), contextual learning (CL), learner motivation (ML), authority sharing (AS), learning facilitation (L.F), and group learning (G.L.), according to the six sub-hypotheses that were put to the test. *Table 3* presents the outcomes.

**Table 3: Correlation of Academic Achievement on Student-Centred Pedagogical Strategy**

	AA	AL	CL	ML	AS	LF	GL
AA	1						
AL	0.139*	1					
	0.012						
CL	0.506**	0.224**	1				
	0.000	0.000					
ML	0.575**	0.152**	0.719**	1			
	0.000	0.004	0.000				
AS	0.285**	0.135*	0.677**	0.582**	1		
	0.000	0.011	0.000	0.000			
LF	0.497**	0.134*	0.574**	0.601**	0.435**	1	
	0.000	0.013	0.000	0.000	0.000		
GL	0.536**	0.164**	0.585**	0.697**	0.448**	0.569**	1
	0.000	0.002	0.000	0.000	0.000	0.000	

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

The results in *Table 3* suggest that all student-centred pedagogical strategies namely; active learning ( $r = 0.139, p = 0.012 < 0.05$ ), contextual learning ( $r = 0.506, p = 0.000 < 0.05$ ), motivation of learners ( $r = 0.575, p = 0.000 < 0.05$ ), authority sharing ( $r = 0.285, p = 0.000 < 0.05$ ), learning facilitation ( $r = 0.497, p = 0.000 < 0.05$ ) and group learning ( $r = 0.536, p = 0.000 < 0.05$ ) had a positive and significant relationship with academic achievement. In other words, hypotheses (H1–H6) were proven correct.

### Regression of Academic Achievement on Student-Centred Pedagogical Strategy

To determine if student-centred pedagogical practices, such as active learning, contextual learning, learner motivation, authority sharing, learning facilitation, and group learning, influenced academic achievement, a regression analysis was conducted at the confirmatory level. The findings are reflected in *Table 4*.

**Table 4: Regression of academic achievement on student-centred pedagogical strategy**

Student-centred Pedagogical Strategy	Standardized Coefficients (β)	Significance (p)
Active Learning	-0.0028	0.545
Contextual learning	0.209	0.003
Motivation of Learners	0.482	0.000
Authority Sharing	-0.089	0.145
Learning Facilitation	0.029	0.658
Group Learning	0.135	0.049
Adjusted R <sup>2</sup> = 0.497		
F = 41.863, p < 0.0001		

*a. Dependent Variable: Academic Achievement*



According to *Table 3* findings, active learning, contextual learning, learner motivation, authority sharing, learning facilitation, and group learning accounted for 49.7% of the variation in students' academic attainment (adjusted  $R^2 = 0.497$ ). It means that other variables not considered by this model accounted for 50.3% of the variation. Nevertheless, only three student-centred pedagogical strategies—contextual learning ( $= 0.209$ ,  $p = 0.003$ ), learner motivation ( $= 0.482$ ,  $p = 0.0001$ ), and group learning ( $= 0.135$ ,  $p = 0.049$ )—had a favourable and substantial impact on student's academic achievement. However, learning facilitation had a somewhat favourable ( $= 0.029$ ,  $p = 0.658 > 0.05$ ) impact on academic performance.

However, authority sharing and active learning both had a negative and insignificant impact on academic performance ( $= -0.089$ ,  $p = 0.145 > 0.05$  and  $= -0.0028$ ,  $p = 0.545 > 0.05$ , respectively). This indicates that only the hypotheses H2, H3, and H6 (H2, H3, & H6) were supported, but H1, H4, & H5 (H1, H4 & H5) were not. The magnitudes of the corresponding betas indicated that, following contextual learning and group learning, learners' motivation strongly influenced academic achievement.

## DISCUSSION

The results showed that the initial hypothesis, which claimed that active learning had a bad and insignificant association, was incorrect. In light of this, the hypothesis was not supported. This finding, however, needs to be more in line with those of earlier researchers. For instance, a study by Fayombo (2012) found statistically significant beneficial associations between active learning techniques and academic results. Additionally, according to Freeman et al. (2014), students who took traditional lectures had a 1.5 times higher failure rate than those who took active learning courses. Khan et al. (2017) also discovered that multidisciplinary collaboration and active learning techniques like discussions boosted learning and raised academic achievement by actively involving students in the different courses.

The second hypothesis, according to which there is a connection between contextual learning and academic accomplishment, produced favourable and substantial results. This indicates that the sub-hypothesis was confirmed. This result supports the conclusions of earlier researchers. For instance, a 2017 study by Danis et al. found that contextual learning affected students' achievement. Similarly, the study by Hasanah et al. (2019) also revealed that students' achievement in cognitive learning was strongly impacted by contextual teaching and learning.

Additionally, Kosassy et al. (2018) discovered that contextual learning favourably influenced students' learning results. The analysis shown above demonstrates that the study's conclusions were consistent with those of earlier researchers. This indicates that the findings obtained within the Ugandan context on contextual learning also significantly impacted the student's academic achievement.

The third hypothesis produced positive and substantial results, according to which there is a connection between students' motivation and academic achievement. This denotes acceptance of the sub-hypothesis. This conclusion is consistent with that of earlier researchers. For instance, Ferreira et al. (2011) found that motivating factors had a potentiating impact on student learning. This agrees with Gupta and Mili's (2016) research. This suggests that motivation among students is crucial to promoting academic achievement, even in the Ugandan context.

The fourth hypothesis, according to which there is a connection between authority sharing and academic success, produced negative and insignificant results. As a result, the hypothesis was disproved. This result was contrary to what earlier researchers had discovered. For instance, Judistira & Wijaya (2017) and Kuhnle et al. (2011) found self-control as a predictor of academic success.

According to the findings of the fifth hypothesis, there is a positive but insignificant association

between learning facilitation and academic accomplishment. In light of this, the hypothesis was not supported. This result did not support the conclusions of earlier researchers. For instance, Chang (2005) and Sharma (2016) found a strong link between effective facilitation and learning achievements.

The application of learning facilitation still has to be revised because the study's conclusions did not agree with those of all prior researchers. This is so because, even when the descriptive results were excellent, they were still below the academic achievement threshold of the students.

The six hypotheses testing the hypothesis that there is a connection between group learning and academic achievement yielded positive and significant results. It gave the impression that the hypothesis was correct. The majority of earlier researchers' findings confirmed this conclusion. This is consistent with earlier results such as Chandra (2015), Fakomogbon and Bolaji (2017), Kaldirim and Tavşanlı (2018). It is clear from the study's results and the earlier findings that group learning is connected to students' academic achievement.

## CONCLUSION

What clearly comes out of this discussion is that group learning, contextual learning, and learner motivation are crucial strategies for enhancing university students' academic achievement. However, measures for improving academic achievement, such as active learning, authority sharing, and learning facilitation, are less successful. Therefore, it is advised that university professors utilize contextual learning, learner motivation, and group learning when teaching to enhance their students' academic achievement. To improve students' academic achievement, teachers should place less emphasis on active learning, authority sharing, and learning facilitation.

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