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Constructivist Classrooms and their Impact on students' academic achievement in Geography in Secondary Schools in Bamenda Urban Municipality in Cameroon

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Abstract: This study investigated on Constructivist Classrooms and their Impact on students' academic achievement in Geography in Secondary Schools in Bamenda Urban Municipality in Cameroon North West Region. Three specific objectives and hypotheses guided the study. The study adopted the descriptive survey design. Eight hundred and fifty-four (854) form four students from three functional public secondary schools in Bamenda Urban Municipality constituted the population of the study. Two hundred and seventy-two (272) form four geography students were selected to form a sample of the study. Data was collected using structured questionnaire. The results show that lecture-illustrative teaching and cooperative learning methods have significantly positive effects on students' academic achievement in Geography as indicated by a p values of 0.000. Also our findings show that the discussion teaching method has no significant positive effect on students' academic achievement in Geography as indicated by a p value of 0.065. We therefore conclude that constructivist classrooms improve students' academic achievement in geography. It is therefore, recommended that geography teachers should use diverse teaching methods to teach lessons in geography in order to improve students' academic achievement.

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Introduction

Previous studies such as that of Van and Nyugen (2022) suggested that learning realized with a social effort, students should be supported so that they can work together and form new knowledge. And for the formation of conceptual structures, common experiences could be utilized at the same time in order to raise a good citizen. According to Dewey, 1972 education is based on action. Knowledge and ideas are only obtained with the trial of cases that seem to be logical and significant to the learner. Dewey criticized traditional teaching methods due to their rote-learning structure and focused on methods where the student could achieve learning through experiences by thinking. Thus, he worked for the creation of study settings where the student was active, s/he could discover knowledge on his/her own, established real experiences with his/her environment, and had experiences (Açıkgöz, 2004). According to Dewey, experience is a physical and cognitive process. For a human, an experience without the involvement of the body and mind cannot exist (Can, 2004). Teaching and learning practices have evolved from classes where students sit silently and listen to their teachers to those in which they actively work with one another and with their instructors to construct new knowledge. In other words, there has been a structural shift from the teacher-centered model to the student-centered model. These conversions, with learners' involvement and interactions at the core, have contributed to the formation of an effective learning environment (Johnson and Johnson, 2012)

Another scientist emphasizing the importance of social interaction and working in this field is Vygotsky's. He believes that children learn concepts and ideas from the communications they establish with adults. He associates learning with social interaction and the social context. He argues that the source of concepts, ideas, phenomena, skills and attitudes acquired by children is the social environment. Based on this, he believes that the source of cognitive development is the interaction between humans and culture before personal psychological processes (Doğan, 2003). It can be said that in these advocated ideas, constructivism is at the foundation of Vygotsky's ideas.

Bruner as cited in Chongwain (2021) considers learning as an active process and in this process the learner forms the new idea and concepts on the existing old knowledge. The learner selects, engages in the exchange of knowledge, forms hypotheses, and makes decisions and whilst doing this, depends on cognitive structures. The student's cognitive structures facilitate the student making sense of his/her experiences, arranging them, and making it to extend beyond provided knowledge. As an extension of this idea, the discovery learning model was developed by Bruner. Bruner's perception of learning and the learner as active, his emphasis on new knowledge being formed existing knowledge through cognitive processes means that in conceptual terms he is on common grounds with Piaget, Vygotsky, and Dewey. Kuhn, Wittgenstein, and Rorty, who are among philosophers of the 20th century, argue the effective participation of the individual in learning and believed that the individual needed to construct knowledge in an authentic context and emphasized that the applicability of the knowledge was important rather than its correctness (Van and Quoc, 2022). The historical or philosophical foundations of the constructivist approach are examined, it can be observed that scientists advocating this approach have the common view that students need to be active in the learning process. This is because according to this view, learning is constituted by the student itself. Student centered education that makes the student active, which is frequently referred to constructivism, takes its foundation from these views. In line with this, how the learning and teaching that shall be actualized according to the constructivist approach should be known.

Olivia (2023) opines that, constructivist approach ensures heterogeneous and cultural diversity in the classroom and facilitates easy grouping in for learners to share previous knowledge, experience the world and reflect upon those experiences to build their own representations and incorporate new information into their pre-existing knowledge. For example, constructivist teachers will do their students lots of good by tasking culturally diverse students in a common group for an activity which has a higher potential of affording these students the opportunity to construct knowledge based on encounter. Constructivism learning approaches such as lecture-illustrative teaching method, discussion teaching method and cooperating learning are some of the approaches needed in teaching social sciences and geography specifically.

Muhammad (2021) Constructivist classrooms is a new educational approach which emphasizes that students are more capable of comprehending information that they construct themselves.

In 21st century, Mahendra (2021) is of the view that, the teaching methods that boast the learner's achievement is the constructivist classrooms approach. This approach has been approved by the education sector globally, African wise and Cameroon education has implemented the Competency Based Approach which is similar to constructivist classrooms. According to Hodges & Harris (2012) competency-based approach of teaching is a movement that began in the United States of America when efforts were made to reform teacher education and training. In Africa, Competences based approach was practiced by practitioners of indigenous education even before the colonial education. The traditional education was based on practical approach

whereby the environment and needs of the society controlled what to be taught and learnt. The African indigenous education was typical of practice, vocational and entails transfer of skills from parents to children. Such basic skills that were environmentally relevant included fishing, hunting, behaviour and respect of customs and tradition. The new teaching-learning practice became indispensable because the colonial education diluted the traditional vocational practices, people erroneously valued this theoretical education which was centered on how to read and write. With the passage of time, employers and companies' exigency competences and skills from educated citizens. From this period, there was a need for a more practical teaching-learning methods.

Constructivism learning approaches such as lecture-illustrative teaching method, discussion teaching method and cooperating learning are some of the approaches needed in teaching social sciences and geography specifically. Since the core bustle in a constructivist classroom is solving problems, students can be allowed to use inquiry methods to ask questions, investigate a topic, and use a variety of resources to find solutions and answers. This perfectly fits the values of constructivism upheld by a teacher who is a progressivist (Lumen 2020).

Constructivist classroom should reflect active participation and deep learning through inquiry-based approach as opposed to surface learning (D'Silvar, 2010). The proponent of constructivism theory provides the following principles for effective teaching and learning: Teaching should begin with content and experiences familiar to the students, so they can make connections to their existing knowledge structures. New knowledge should be presented in the context of real-life applications, rather than abstract, Knowledge should be presented in a manner that does not change students' cognitive models drastically.

Concept of lecture illustration method of teaching

According to lule (2022), opines that, lecture-illustrative method of teaching is a decoration, interpretation or visual explanation of a text, concept or process, designed for integration in print and digital published media, such as posters, flyers, magazines, books, teaching materials, animations, video games and films.

Chongwain (2021) opines that lecture illustration is a visual teaching method which involves showing students illustrative aids; like posters, chats maps, sketches, on the board, painting, portraits of scientists improves students' academic achievement and boast their critical thinking skills and problem solving abilities. Tambo, (2013) opines that lecture- illustration method involves a presentation or explanation accompanied by some illustrations like maps, diagrams, graphs, and pictures. The teacher explains and tests to find out if the learners have learnt. The testing is done by having the learners draw maps, graphs, and diagrams to show their understanding. It is important when using this method, to have the illustrations available beforehand. Beth, and Betancourt, (2018), agree with the view that illustrations improves students' understanding and learning.

Concept of discussion method of teaching

According to Dillon, (1994) in Christopher (2020), discussion method of teaching can be defined as "a form of group interaction, people talking back-and-forth with one another" about a particular issue, and proposals offered. Those proposals could include various understandings, facts, suggestions, opinions, perspectives, and experiences. Ishaku (2019), is of the view that, there are different types of discussion methods this include; Round table discussion which involves small number of persons nearly three to eight. It needs a moderator to introduce the members of the discussion group, present the problem to be discussed and keep the discussion moving. The leader's role is one of guiding the group rather than one of dominating it. The responsibilities of a moderator included the introduction of the topic, keep the discussion moving, and avoid having the group become sidetracked, avoid quibbling over irrelevancies, summarize and draw conclusions. Kagan (2013), in Arayati et al (2022) is of the opinion that, round table technique will achieve some advantages in terms of academic and social point of view.

Concept of cooperative learning

Bethany (2021) found that in order for cooperative learning to be successful within a classroom, the teacher needs training and a strong foundation of cooperative learning. Cooperative learning can help students build and further develop all of those important lifelong skills. According to Van Ryzin and Roseth (2018), cooperative learning can also help improve students' social interaction and decrease victimization, stress, emotional problems, bullying, and more.

Students' academic achievement: Zhou and Siti, (,2022) and Moya (2020) are of the view that, academic achievement is considered to be equal to academic performance, and the common measure of academic achievement of college students is GPA (credit point average), which can be accurately calculated from the marks of each course to measure students' academic achievement. "Academic" means the result of school work.

Statement of the Problem

The issue of academic achievement in geography still remains a major problem in Cameroon's educational system. Factors that could be affecting their academic achievement could be the methods geography teachers used in teaching the subject Sarkar (2016), (Datti & Garba, 2015) in

(Mugisha, 2020). Widely used methods include the traditional methods like the lecture, recitation, and note copying. The use of these methods in Cameroon schools has not only led to high failure rate in geography but has equally caused many students to dread the subject according to MINESEC/IGE/IP-SS, (2019). This has affected the student's academic achievement in geography negatively. Percentage pass in geography at Ordinary Level GCE in Cameroon shows fluctuation in the results for the past three years.

Jinghang (2024), is of the view that traditional teaching and learning, which uses mostly teacher-centered approach inhibits both teachers' and learners' initiative and innovation and does not promote critical thinking in learners. It prompts teachers and learners to pursue examination results; does not develop entrepreneurship in learners; and neither equip learners with skills for a challenging workplace. The absence of constructivist classrooms making use of lecture-illustrative method of teaching, discussion method of teaching and cooperative learning has affected students' academic achievement in geography. This study therefore intends to find out the impact of constructivist classrooms on students' academic achievement of students in Geography in secondary schools in Bamenda Urban Municipality.

Research Questions

- How does the use of illustrative method of teaching affect students' academic achievement in Geography?
- To what extent does the use of discussion method of teaching affects students' academic achievement in Geography?
- How does the use of cooperative learning affect students' academic achievement in Geography?

Research Hypotheses

Ho: Constructivist classrooms have no significant influence on students' academic achievement in geography in some secondary schools in Bamenda Urban Municipality.

H_1: constructivist classrooms have significant influence on students' academic achievement in geography in some secondary schools in Bamenda Urban Municipality.

Objectives

The main objective of this study was to investigate the impact of constructivist classrooms on students' academic achievement in geography in some secondary schools in Bamenda Urban Municipality in the North West Region of Cameroon. To attain this, we sought to:

- Examine the influence of illustrative teaching method on students' academic achievement in geography.
- Verify how discussion teaching method affects students' academic achievement in geography.
- Evaluate the influence of cooperative learning on students' academic achievement in geography.

Materials and Methods

Study design

This study made use of the descriptive survey research design, specifically a cross-sectional survey. A four-point Likert scale questionnaire was used with SA for strongly agree, A for agree, D for disagree, SD for strongly disagree was adopted.

Population sampling

The target population was made up of all the form four students of the functional general education government secondary schools of Bamenda I, II and III subdivisions in the Mezam Division of Cameroon. The target population was 1375 students with 596 males and 779 females. The accessible population of this study was made up of all the students in form four offering geography in GBHS Bayelle, in Bamenda III, GBHS Bamendawke, in Bamenda I, and GBHS Bamenda, in Bamenda II, with a population size of 854 Geography students. The multistage sampling procedure was used with a combination of both simple random and purposive sampling techniques. And a sample size of 272 form four students were obtained for the study.

Ethical Considerations

This study was authorized by the Divisional delegation for Mezam of the North West Region of Cameroon under the registration number N°00082/2024 MINSEC/RDSE/DDSE/CSAF and the Faculty of Education of the University of Bamenda under the reference number N° 00272024/UBa/d/FED/VD-RC/HOS-RC. Questionnaires were administered on the basis of confidentiality and subjects were informed that participation is voluntary and will only take place if they give their consent.

Statistical analysis

Both descriptive and inferential statistics were used for data analysis and presentation. The ANOVA was used to compare the means. Values were considered significantly different when p-values were less than 0.05 at 95% confident interval.

Results and Discussion

Results

Effect of illustration method of teaching on the academic achievement of Geography students

Table 1 shows the descriptive statistics of the responses to the various questionnaire entries on the illustration method of teaching. The table reveals that the responses in relation to illustration method of teaching had means ranging from 2.54 to 3.43 on a Likert scale of 4 points.

Table 1: Descriptive Statistics for the effect of the illustration method on the academic achievement of Geography students

S/N	Opinion Statements	Frequency of Responses				Mean	Std. Deviation
		SA	A	D	SD		
1	Using diagrams to teach makes learning Geography simpler	114	142	15	1	3.36	.603
2	My Geography teacher uses charts to teach us well in my geography and test examination.	61	121	67	23	2.81	.880
3	I am always bored because I don't understand some drawings on the chart	44	94	100	34	2.54	.908
4	The use of globes helps me to understand how day and night occur and how seasons are caused	89	105	57	21	2.96	.921
5	The use of maps helps me to understand map reading that boast my results	90	130	41	11	3.10	.797
6	Using graphs during Geography lessons takes time and it is tiring	48	95	95	34	2.58	.922
7	My geography teacher encourages students to use textbooks to increase understanding in Geography	106	92	52	22	3.04	.952
8	I achieve better in Geography when my teacher uses Illustrative method to teach.	135	124	7	6	3.43	.656

SA for strongly agree, A for agree, D for disagree, SD for strongly disagree

Table 2 is the regression model summary which shows that a low positive relationship (R = 0.269) exists between illustration method of teaching and students' academic achievement in Geography. This means that when the use of illustration method of teaching increases, students' academic achievement in Geography also increases, though to a low extent. Furthermore, R-Square for the overall model is 0.072, with an adjusted R-Square of 0.069. This suggests that 7.2% of the variations in students' academic achievement in Geography can be accounted for by the use of the illustration method of teaching.

Table 2: Regression Model Summary on illustrative teaching method and its effects on students' academic achievement in Geography

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.269[a]	.072	.069	2.954

a. Predictors: (Constant), Illustrative teaching method

Table 3 shows the regression coefficients of the illustrative method and its effect on student achievement. This table indicates that;

The Students' academic achievement in Geography = 16.766 + 0.258* x *Illustrative teaching method

Thus, when the illustration method of teaching is absent, students' academic achievement in Geography is at 4.587. When the use of illustration method of teaching increases by one unit, students' academic achievement in Geography increases by 0.258. This increase is significant at the 0.05 level of significance as indicated by the p-value of 0.000.

Table 3: Regression Coefficients for illustration method of teaching and its effect on students' academic achievement in Geography

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	16.766	1.258		13.327	.000	14.289	19.243
	Illustrative teaching method	.258	.056	.269	4.590	.000	.147	.369

a. Dependent Variable: Students' academic achievement in Geography

Table 4 represents the ANOVA table which shows that F (1,270) = 21.066 with p = 0.000. This test is significant at the 0.05 level of significance and consequently, shows that the illustrative method of teaching has an effect on student academic achievement. It can therefore be concluded that the illustrative teaching method has significantly positive effects on students' academic achievement in Geography.

Table 4: ANOVA Table of Regression Analysis for illustration method of teaching and its effects on Students' academic achievement in Geography

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	183.827	1	183.827	21.066	.000[b]
	Residual	2356.081	270	8.726		
	Total	2539.908	271			

a. Dependent Variable: Students' academic achievement in Geography

b. Predictors: (Constant), Illustrative teaching method

Effect of discussion method of teaching on the academic achievement of Geography students

Table 5 shows the descriptive statistics of the responses to the various questionnaire items on the discussion method. The table further reveals that the responses in relation to discussion methods had means ranging from 1.85 to 3.36 on a Likert scale of 4 points.

Table 5: Descriptive Statistics for the effect of the discussion method on the academic achievement of Geography students

S/N	Opinion Statements	Frequency of Responses				Mean	Std. Deviation
		SA	A	D	SD		
9	My geography teacher group us and gives task to do in most of his lessons	21	32	105	114	1.85	.909
10	My geography teacher gives us equal opportunities to talk during discussion	89	103	44	36	2.90	1.006
11	The geography teacher facilitates discussion that helps students to understand geography lessons better	93	119	41	19	3.05	.879
12	My teacher form small groups and share topics for us to think and discuss in class.	22	49	102	99	1.98	.933
13	Not all students take part during discussion session in Geography	93	118	21	40	2.97	1.005
14	Group discussions promote students learning in Geography	117	129	18	8	3.31	.723
15	When students work in groups they have better marks in test and examination results	139	104	18	11	3.36	.780
16	Students share ideas and help each other with their academic achievement	83	137	37	15	3.06	.813

SA for strongly agree, A for agree, D for disagree, SD for strongly disagree

Table 6 is the regression model summary table which shows that, a low positive relationship (R = 0.112) exist between discussion method of teaching and students' academic achievement in Geography. This means that when the use of discussion method increases, students' academic achievement in Geography also increase, although to a low extent. Furthermore, R-Square for the overall model is 0.013 with an adjusted R-Square of 0.009. This suggests that only 1.3% of the variations in students' academic achievement in Geography can be accounted for by the use of the discussion method.

Table 6: Regression Model Summary on discussion method and its effect on students' academic achievement in Geography

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.112[a]	.013	.009	7.040

a. Predictors: (Constant), Discussion method

Table 7 shows the regression coefficients for the discussion method and its effect on students' achievements. This table indicate that;

The students' academic achievement in Geography = 16.609 + 0.309 x *Discussion method*

Thus, when Discussion method is absent, students' academic achievement in Geography is at 16.609. When the use of Discussion method increases by one unit, students' academic achievement in Geography increases by 0.309. This increase is not significant at the 0.05 level of significance as indicated by the p-value of 0.065.

Table 7: Regression Coefficients for Discussion method and its effect on students' academic achievement in Geography

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	16.609	3.995		4.158	.000	8.744	24.474
	Discussion method	.309	.167	.112	1.851	.065	-.020	.637

a. Dependent Variable: Students' academic achievement in Geography

Table 8 shows that F (1,270) = 3.427 with p = 0.065. This test is not significant at the 0.05 level of significance. It can therefore be concluded that the discussion method does not significantly affect students' academic achievement in Geography.

Table 8: ANOVA Table of Regression Analysis for Discussion method and its effects on students' academic achievement in Geography

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	169.861	1	169.861	3.427	.065[b]
	Residual	13382.547	270	49.565		
	Total	13552.408	271			

a. Dependent Variable: Students' academic achievement in Geography

b. Predictors: (Constant), Discussion method

Effect of cooperative learning on the academic achievement of Geography students

Table 9 shows the descriptive statistics of the responses to the various questionnaire items on Cooperative learning. The table further reveals that the responses in relation to Cooperative learning had means ranging from 2.00 to 3.12 on a Likert scale of 4 points.

Table 9: Descriptive Statistics for the effect of cooperative learning on the academic achievement of Geography students

S/N	Opinion Statements	Frequency of Responses				Mean	Std. Deviation
		SA	A	D	SD		
17	I like working with other students on geography assignments	102	119	32	19	3.12	.872
18	I learn better when working with my peers	90	116	49	17	3.03	.874
19	working together makes it less challenging for me to get my geography task done	90	119	38	25	3.01	.917
20	my contribution to the group are respected by my peers	47	129	59	37	2.68	.915
21	I feel discouraged when my ideas are not taken into considerations in geography lessons	82	85	62	43	2.76	1.052
22	I always shy away from group studies and spent more time on social networks	37	36	88	111	2.00	1.043
23	I am more responsible for learning when contributing to a group	73	117	56	26	2.87	.918
24	My peers evenly contribute ideas or fairly complete task while collaborating	41	128	79	24	2.68	.835

SA for strongly agree, A for agree, D for disagree, SD for strongly disagree

Table 10 is the regression model summary which indicates that a moderate positive relationship (R= 0.424) exists between Cooperative learning and students' academic achievement in Geography. This means that when the use of Cooperative learning increases, students' academic achievement in Geography also increases. Furthermore, R-Square for the overall model is 0.180 with an adjusted R-Square of 0.176. This suggests that 18.0% of the variations in students' academic achievement in Geography can be accounted for by the use of Cooperative learning method.

Table 10: Regression Model Summary on Cooperative learning and its effect on students' academic achievement in Geography

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.424[a]	.180	.176	3.214

a. Predictors: (Constant), Cooperative learning

Table 11 shows the regression coefficients and indicates that;

Students' academic achievement in Geography = 4.552 + 0.621 x *Cooperative learning*

Thus when Cooperative learning is absent, students' academic achievement in Geography is at 4.552. When the use of cooperative learning increases by one unit, students' academic achievement in Geography increases by 0.621. This increase is significant at the 0.05 level of significance as indicated by the p-value of 0.000.

Table 11: Regression Coefficients for Cooperative learning and its effect on students' academic achievement in Geography

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	4.552	1.538		2.951	.003	1.539	7.621
	Cooperative learning	.621	.076	.441	8.107	.000	.476	.779

a. Dependent Variable: Students' academic achievement in Geography

Table 12 shows that F (1,270) = 66.971 with p = 0.000. This test is significant at the 0.05 level of significance. It can therefore be concluded that Cooperative learning has a significantly positive effect on students' academic achievement in Geography.

Table 12: ANOVA Table of Regression Analysis for effect of Cooperative learning on students' academic achievement in Geography

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	793.822	1	793.879	66.971	.000[b]
	Residual	3081.734	270	11.849		
	Total	3875.556	271			

a. Dependent Variable: Students' academic achievement in Geography

b. Predictors: (Constant), Cooperative learning

Discussion

The investigation of the effect of the illustration method of teaching on the academic achievement of Geography students shows that, 7.2% of the variations in students' academic achievement in Geography can be accounted for by the use of the illustration method of teaching. This means that illustrative teaching method has significantly positive effect on students' academic achievement in Geography as indicated by a p value of 0.000. It can therefore be concluded that the illustrative teaching method has significantly positive effects on students' academic achievement in Geography. The finding is in line with that of Tambo (2012), Pechele (2016), Mugisha (2020), Chongwain (2021). Beth and Betancourt (2018) agreed that illustrative method of teaching with the aid of graphs, charts, maps, chalkboard and recommended textbooks when appropriately used, in the teaching and learning of geography in secondary schools will definitely improve the students' academic achievement.

The investigation of the effect of the discussion method of teaching on the academic achievement of Geography students shows that, 1.3% of the variations in students' academic achievement in Geography can be accounted for by the use of the discussion method. This means that the Discussion teaching method has no significant positive effect on students' academic achievement in Geography as indicated by a p value of 0.065. Thus discussion method does not significantly affect students' academic achievement in Geography. It can therefore be concluded that discussion method of teaching does not have a positive effect on students' academic achievement in geography. This finding is in line with the studies of Kogan (2013) and Aravati et al (2022) who said that, the types of discussion like round table technique will have some advantages in terms of academic and social point of view like assessing prior knowledge, practical skills, recalling information, creating and team building.

The investigation of the effect of cooperative learning of teaching on the academic achievement of Geography students shows that, 18.0% of the variations in students' academic achievement in Geography can be accounted for by the use of Cooperative learning method. This means that cooperative learning method has significantly positive effect on students' academic achievement in Geography as indicated by a p value of 0.000. Thus Cooperative learning has a significantly positive effect on students' academic achievement in Geography. This finding is in line with Massar, (2017), Yusuf (2011), Kristen and Douglas (2002), who reported that cooperative learning helps teachers manage large classes of students with diverse needs and improve academic achievement and social development. In the last decade, there is vast amount of research done on cooperative learning in science and mathematics indicating positive results on academic performance of students using cooperative learning strategy.

This evidence as presented above adds to the voice of other researchers that constructivist classrooms has a significant effect on students' academic achievement in geography as Nauman et al (2020) highlighted that constructivist pedagogy are effective in enhancing the students learning. Students' decision making ability could be improved through constructivist pedagogy.

Conclusion

Based on the discussions and findings of this study, the following conclusion was drawn, Constructivist classrooms like illustrative method of teaching and cooperative learning appear to have a strong record of successes in increasing students' motivation to learn and enhancing higher academic achievement. Meanwhile, discussion method of teaching does not affect students' academic achievement in geography according to our findings. Illustrative method, and cooperative learning according to this study have been proven to have a great effect on students' academic achievement in geography, reason being that when geography teachers turn to use diverse methods of teaching as mentioned above, it motivates students to study hard, think critically and add new knowledge to prior knowledge and above all achieve better in their tests, assignments and get good results. We are in a dynamic society, the teaching methods for a meaningful learning should also be dynamic. It is therefore, recommended that geography teachers should use diverse teaching methods to teach lessons in geography

in order to improve students' academic achievement. It is also recommended that teachers should make regular efforts to involve the learners in the teaching and learning process so that students should be active not passive.

Conflicts of Interest

Authors declare that there are no conflicts of interest.

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Authors' Contribution

Nfor Doreen Jaika: Conception, data collection and analysis, writing, and approval of final manuscript for submission.

Chongwain Lilly Oyoma Jehovah: Conception, writing and approval of final manuscript for submission.

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