

# **Influence of Use of Discussion Teaching Strategy on Learning and Performance of Learners in Geography in Public Secondary Schools in Nyakach Sub-County, Kenya**

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## **Abstract**

## **Original Research Article**

Geography education equips learners with knowledge and skills to understand and analyse existing relationships among phenomena and help offer solutions to challenges of the world. Being a hands-on, minds-on subject, geography ought to be taught using interactive strategies for better performance. In Kenya, concerns have been raised by stakeholders on how geography is taught in secondary schools in Nyakach because performance has been declining in recent years. This study sought to examine the influence of utilization of discussion teaching strategy on learning and performance of learners in geography in public secondary schools in Nyakach. The study was underpinned by the social constructivists' theory of learning which postulates that knowledge is believed to be constructed by individual learners in a social setting. The conceptual framework was based on the effect of independent variable (discussion teaching strategy) on the dependent variable (learning and performance in geography). Mixed methods approach was used. Concurrent triangulation design was utilised as both quantitative and qualitative data from various sources and contexts were compared and verified. The study used proportionate stratified, purposive, simple random and saturated sampling to arrive at various sample sizes. Data was collected through questionnaires, interviews, observations, focus group discussions and document analysis. Data obtained were coded for analysis using the Statistical Package for Social Sciences (SPSS) version 29. Quantitative data were analysed by descriptive statistics; frequency distribution, percentages; and means were used to draw inferences based on findings. Qualitative data were subjected to thematic analysis. The main findings of the study were that: 75% teachers use large discussion groups to teach geography while majority of learners prefer small discussion groups which promote deeper understanding of abstract content. Recommendations are; teachers be retooled to enhance their use of small group strategy, funding be increased for geography to improve learning and performance in the subject.

**Keywords:** Geography Education, Discussion Teaching Strategy, Student Performance, Interactive Learning, Secondary Schools, Nyakach, Social Constructivism, Mixed Methods, Group Learning, SPSS Analysis.

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## **INTRODUCTION**

It cannot be overemphasized that teachers' output in any educational instructional practice is best measured through learners' acquisition of diverse skills. This raises questions perhaps about the way geography is taught in schools around the globe. Alam, (2015), Sandor and Homoki (2020) reiterate that applying diverse methods in teaching Geography results in

acquiring a deeper knowledge of the subject. The diverse methods include discussion, field work and modelling among others.

Discussion is an interactive method of teaching which involves free verbal exchange of ideas between the teacher and learners, and among the learners themselves. Learners are allowed to have prior knowledge in basic concepts related to the topic to

be discussed to enable them provide solutions to problems (McCarthy, 1992; Padugupati, 2017). The strengths of class discussion include pooling ideas and experiences and allowing mass and active individual participation of learners (McCarthy, 1992). The method is suitable for an issue in which there is a difference of opinion (Kochnar, 2000) so that participants air their varied views and perhaps arrive at a common conclusion. The role of a teacher in a discussion is to be a facilitator and to let students share ideas and pool resources. Therefore, the less the teacher talks the better.

Discussion method offers opportunity for a good deal of learner activity and feedback and could be more effective than typical lectures in developing concepts and problem-solving skills. Discussion method is now used by some teachers in teaching social sciences (read geography) because it is pragmatist in approach, enabling learners to be active participants in the instructional process (Kelfine, Maiyo, and Okere, 2018). This active involvement of learners is important as it not only elicits interest but guarantees acquisition of various skills which according to Adarkwah (2020) include expressive communication, analysis, critical thinking and collaborative learning which enable learners to have a deeper understanding of the subject. Furthermore, learners may also develop values such as responsibility, teamwork, cooperation, tolerance and patience.

Brookfield and Preskill (2016) say that small group discussion involves placing mature learners with mixed abilities and perspectives into groups of 4-6 with the aim to discuss relevant and goal specific tasks as guided by the teacher. The small number of members is to ensure that everyone gets opportunity to contribute meaningfully to the topic, hence learners feel they own their learning and therefore it is expected that learners participate actively during discussion. They explain further that the teacher then assigns to learners through their input various roles such as recorder, leader and presenter to group members with the purpose to cultivate accountability and balanced participation in each group.

According to Chi and Wylie (2014), whole class discussion provides an experience where learners build on one another's ideas going beyond rote memorization hence deeper conceptual understanding. The structure of large class discussion as presented by Brookfield and Preskill (2016) intimates an instructional process that involves a lot of teacher input starting by preparation and goal setting on what is to be achieved through discussion; initiating and facilitating discussion by posing open ended questions and encouraging learners to actively participate; use of summary to conclude discussion; and finally urging learners to reflect on influence of discussion on their understanding of concepts that are learned during the lesson.

Concerning panel discussion, Bonwell and Eison (1991) state that they (panels) provide an instructional context in which a small group of learners presents and discusses topics in front of class followed by question answer session such that in the final phase the teacher provides a summary of main points as they wrap up the lesson. Rosadi, Nuraeni and Priadi, (2020)

Oyakhrome and Orheruata (2021) have focused their work on discussion as a whole, with others (Adediran and Olayiwola 2020; Kaya and Polat, 2023; Istfanus and Dakur, 2024) specifying a given discussion technique as study topics. None the less, Gokhale (1995), seems to make a general observation without intimating which discussion format provides learners with more opportunity to acquire higher cognitive skills which translate into higher and better performance in academic tasks.

## Purpose of the Study

The purpose of this study was to assess the influence of discussion teaching strategy on learning and performance of learners in geography in public secondary schools in Nyakach Sub-County, Kisumu County, Kenya.

## Research Hypothesis

There is no relationship between influence of discussion teaching strategy and learning and performance of learners in Geography in Public Secondary Schools in Nyakach Sub-County, Kisumu County, Kenya.

## METHODOLOGY

### Research Design

This study comprised both quantitative and qualitative data and hence adopted a mixed methods approach because (Almeida, 2018), avers that this approach in research combines both quantitative and qualitative methods into a single study in order to provide a broader and more complete vision of a problem (Creswell, 2014). Specifically, the concurrent triangulation design explained by (Koskey and Stewart, 2013) was applied in this study because it capacitated the researcher to obtain different but complementary data from various respondents (QUASO, Heads of Humanities Department, Geography teachers and students of geography) on the same topic using different data collection methods such as questionnaire, interviews, discussions, observation (Almeida, 2018); at different times, locations and contexts (Bamberger, 2012). Concurrent triangulation was most suitable for this study as it allowed the researcher to separate analysis of both quantitative and qualitative data, do a comparison, and verify if findings from both could confirm or disconfirm each other.

### Population and Sample Size

The target population for the study was 52 secondary schools within Nyakach Sub-county. Saunders (2003), defines study population as a full set of cases from which a sample is drawn. According to Kisumu County Education Registry (2024), there are 52 secondary schools in Nyakach Sub-County. The schools are classified as extra-county, county and sub-county depending on resource and infrastructural endowment. The accessible population included one Quality Assurance Officer (QUASO) based at the Sub-county education offices, 52 Heads of Humanities Department, 136 Geography teachers and 2,016 Form Three Geography students. Proportionate systematic sampling was used to obtain a sample of 17

schools, 60 teachers and 327 students while by saturated and purposive sampling one Quaso and 17 Hods were obtained respectively.

## Data Collection

The study used five instruments for data collection namely: two sets of questionnaires (one for teachers and the other for students) interviews, observations and focus group discussions. The questionnaires consisted of both closed and open-ended questions. The questionnaire for teachers was used to collect data on their gender, experience, academic qualifications and their perception on the influence of the utilization of the discussion teaching strategy on teaching, learning and performance of students. They were required to give their views on a five point-likert scale consisting of five options namely, 'strongly agree', 'agree', 'disagree' or 'strongly disagree' with 'undecided' option in the middle. QUASO and HoD interview schedules were meant to collect personal data and their perception on the teaching and learning strategies used in teaching Geography. The classroom observation guide was used to establish if the teachers applied the mentioned strategy or not in their teaching time. Finally the focus group discussion guide was used to collect information from the students on how they viewed the use of discussion strategy and challenges faced in the learning of Geography.

## INSTRUMENTATION

### Validity of the Instruments:

For the purpose of this study, both the face and content validity of the instruments were ensured. To ensure validity of the instruments, the initial drafts of the instruments were scrutinized by experts in questionnaire and observation guide construction who were required to check for all non-technical flaws in the instruments. Such inputs enhanced a thorough validation in order to ensure that the instruments actually measured what they were intended to measure in relation to the research hypothesis. Based on the suggestions and comments of

these experts, the necessary corrections were made before the final version of the instruments were trial tested on a sample of 14 teachers who were not included in the actual study sample, in Nyakach sub-county Kisumu County, Kenya.

### Reliability of the Instruments

Reliability of the instruments namely, teacher questionnaire, students' questionnaire and classroom observation guide were verified through examination of internal consistency of the measures. This was achieved by computing Cronbach's alpha ( $\alpha$ ) coefficients using the Statistical Package for Social Sciencies (SPSS) version 29. The decision on instrument reliability was based on Frankel and Wallen's (2000) advice that reliability should be at least 0.70 and above. The classroom observation guide was at 0.797 while the teachers' questionnaire (TQ) was at 0.833. The construct, content and criterion related validities were found to be adequate.

### Data Collection and Analysis Procedure

The necessary data for this study were obtained from teachers, HoDs and students of the selected schools in the sub-county. After collection of data, questionnaire responses without corresponding responses to the classroom observation guide (COG) were discarded. The questionnaires were then collected for safe custody awaiting analysis. The researcher also requested for the opportunity to observe lessons to be taught by the respondents. The observation and data collection lasted for one school term. Data were analyzed using multiple regression at .05 level of significance.

### Presentation of Findings

The objective on this strategy was to explore how the use of discussion as a teaching strategy influences the teaching and learning of geography in public secondary schools in Nyakach Sub-County, Kenya. Results on items on the Likert scale that sought response from both teachers and learners were examined under the statements below.

**Table 1: Teachers' response on use of discussion method**

Item	SA		A		U		D		SD		TOTAL	
	F	%	F	%	F	%	F	%	F	%	F	%
1.I use discussion method in teaching geography	5	8.4	4	6.7	14	23.3	23	38.3	14	23.3	60	100
2.During my lessons, I group students for discussion	0	0	6	10	13	21.6	40	66.7	1	1.7	60	100
3.I place learners in small groups during lessons	1	1.7	2	3.3	23	38.3	28	46.7	6	10.0	60	100
4.I place learners in large groups during lessons	10	16.7	35	58.3	11	18.3	3	5.0	1	1.7	60	100
5.I use panel method of discussion during lessons	0	0	4	6.7	11	18.3	29	48.3	16	26.7	60	100

Table 1 shows that out of 60 teacher respondents, 37 (61.6%) responded *strongly disagree* and *disagree* that they use discussion method in teaching geography. This is in agreement with the opinion of the majority of students as highlighted in Table 2, item 1 in which majority of learners, that is 96.6% corroborate teachers' response that they do not use discussion strategy to teach geography. Furthermore, a paltry 15.1 percent of teacher respondents were in the affirmative that they use discussion for geography instruction. It is however, on record that 23.3% of teachers were undecided on whether they use or not discussion method. This casts a lot of doubt on teachers' commitment about employment of discussion during geography instruction as they display no knowledge of use of discussion. The findings on use of discussion reveal that overall more students (96.6%) unlike teachers (61.6%) reported generally non-use of discussion teaching strategy by teachers during geography lessons.

Concerning grouping learners for discussion, Table 1 item 2 shows that out of 60 teachers, 41 (68.4%) responded *strongly disagree* and *disagree* that during geography lessons they place students in groups. Furthermore, only 10% responded *agree* to placing students in groups, while 21.6% chose *undecided* on the statement. Thus, 68.4% of the teachers seem to reinforce the students' views as contained in Table 2 item 2 that they do not form discussion groups during geography lessons.

More findings are displayed in Table 1 concerning nature of grouping of learners with reference to whether the groups are small, large or panel type. Table 1 item 3 for example shows that while (56.7%) teachers responded *strongly disagree* and *disagree* with regard to placing students in small discussion groups, 38.3% of them responded that they were *undecided* as to whether they place the learners in small groups, leaving a

paltry 5% responding *agree and strongly agree* concerning having learners form small discussion groups. Closer analysis of findings in Table 2 item 2 below reveals that a high percentage of students (78%) disagree that teachers place them in small discussion groups while a moderately higher percentage (56.7%) of teacher respondents negate placing learners in small groups.

Concerning whether teachers place learners in large groups during geography instruction, findings in Table 1 item 4 show that 45 (75%) of the teachers responded that they are in the agreement that they place learners in large groups while only 1.7% of the teachers *strongly disagree* that they place learners in large groups. Furthermore, 18.3% were *undecided* on whether they place learners in large groups during geography lessons with 5% responding that they disagree to placing students in large groups for discussion. Overall, it is evident from Table 1 item 4 that many teachers agreed that they place students in large discussion groups to facilitate learning. Finally, teachers were required to respond to question statement on use of panel discussion groups whose findings are displayed on Table 1 item 5. Here, 45 (75%) of the teachers chose both *strongly disagree* and *disagree* that they use panel method of discussion during geography lessons. However, 18.3% were *undecided* while a handful of the teachers, that is, 6.7% indicated that they *agree* that they use panel discussion for instruction in geography.

Group discussion can take the form of small groups, large group or a panel to steer the discussion in a given content in geography. The study sought to explore the nature of the discussion used by the teachers in teaching and learning of geography. These findings are corroborated by the learners as shown in Table 2 below.

Table 2: Student’s responses on use of discussion method

Item	SA		A		U		D		SD		TOTAL	
	F	%	F	%	F	%	F	%	F	%	F	%
1.Our geography teacher uses discussion method	7	2.2	2	0.6	2	0.6	45	13.9	267	82.7	323	100
2.We form Discussion groups in our class	48	14.9	14	4.3	9	2.8	85	26.3	167	51.7	323	100

Besides use of questionnaires in this study, more data on use of discussion strategy in geography instruction in secondary schools in Nyakach were derived through interviews with EQUASO and Hods, focused group discussion (FDG's) with learners, lesson observation and documents analysis. As concerns interviews, EQUASO in Nyakach Sub-county was asked to reveal strategies that teachers use most to teach geography. This question aimed to find out whether the four selected strategies that are pivotal in this study were popular with geography teachers. The response revealed that teachers mostly used lecture, discussion, oral questioning and demonstrations. Others that were mentioned included practical work and fieldwork whose use EQUASO emphasized are subject to prevailing school programmes such as games and

music which tend to compete with geography for the available limited funds and time. On further prodding for opinion on how discussions are used to facilitate geography instruction, EQUASO had this to say: ‘ yes, through brainstorming and debate kind of discussion, these are popular with teachers, perhaps due to large classes and also limited space, also huge content at the hands of teachers, to complete it in a rather short time’ EQUASO was again quick to add: ‘on school visits, we urge teachers to engage learners in a lot of small group discussion at all costs, first to dispel fear among learners but much more to ease understanding of abstract content through collaboration’. Finally, when asked to elaborate on additional strategies that could improve teaching and learning of geography, EQUASO underscored that improvement is



possible if only through integration of information communication and technology to help harness already existing instructional strategies.

Interview with Hods revealed that majority (75%) affirmed just like the one EQUASO above, that teachers of geography commonly used lecture and oral questioning for instruction with a bit of whole class discussion sessions. However, it is ironical that discussion seems not a priority, with many Hods thus omitting its mention when asked for strategies that are commonly used by teachers- only to bring it up when a subsequent question was asked seeking their opinion concerning strategies that could be used to improve geography instruction. Some verbatim statements that were obtained from Hods concerning utilization of discussion went this way: *'discussion especially, those small-groups, fieldwork and teacher demonstrations can unlock learners' understanding of hard stuff and bring about improved scores but teachers rarely use them* (Hod 3). Other respondents such as Hod 6, Hod 10 and Hod 13 had a common line of thought that: *'teachers could engage with learners in a lot of free discussions, questioning and practicals during in-door and outdoor lessons for positive results to be realized in geography'*. More findings were obtained from FGDs pertaining use of discussion for learning purposes. Many learners said discussions, especially the small group type were not much in use during lessons. Furthermore, during those times that discussions were used, some learners

said they did not gain much- but why? According to Lnr 8 frm sch 2 not much benefit comes from discussion because they are usually brief and done speedily leaving many concepts not clarified during lessons. During some of discussions especially the large group and panel formations not all learners may have opportunity to participate hence denying them chance to learn more. However, more learners (Lnr 19, Lnr 21from sch 10) said they were aware that discussions aided them to step up their scores. For example, Lnr 11 sch 2 still on discussion reiterated that *'...exchange of ideas in our small discussion group made me understand content deeply enabling me to do well'*.

More results from other instruments namely lesson observation and document analysis revealed that there were some missing links in both the planning for and actual use of discussion in lessons. This is because while all the 6 sampled teachers for observation had indicated in their lesson plans the intention to use discussion in their lessons, most of these teachers that is, 66.6% derived from observation results did not use discussion at all during the lesson while only 33.3% used the strategy during the lesson.

In order to do a detailed comparison of results from questionnaires covering discussion strategy, means and measure of skewedness were generated and presented in Tables 3 and 4.

Table 3 Mean values on use of discussion as a teaching strategy by teachers of geography

Statistics	I use discussion method in teaching geography	During my lessons, I group students for discussion	I place learners in small groups during lessons	I place learners in large groups during lessons	I use panel method of discussion during lessons
N	60	60	60	60	60
Mean	2.38	2.40	2.40	2.17	2.05
Skewness	.790	1.159	.452	.979	.583

Source: Researcher (2024)

Table 3 shows a mean of 2.38 which indicates that teachers use discussion method to teach geography. A positive skewness of .979 and .452 points to the fact that teachers taught by placing

learners in large groups of discussion compared to them teaching by placing learners in small discussion groups.

Table 4 Mean values for use of discussion as a learning strategy by students

Statistics		Our geography teacher uses discussion method in class when teaching Geography	We form discussion groups in our class to discuss topics in Geography during the lesson
N		323	323
Mean		1.26	2.04
Skewness		3.802	1.230

A mean of 1.26 and a positive skewness measure of 3.802 as shown in Table 4 shows concurrence with the indicated statement that teachers use discussion and also facilitate formation of discussion groups among learners. Furthermore, the right-skewed measures imply that there are small positive gains in learning of geography when discussion as a strategy is used. This finding is consistent with results from FGDs submitted by Lnr 19 and Lnr 21 both from sch10 who said that discussions aided them to step up their scores, while Lnr 11 sch 2 still on discussion reiterated that ‘...*exchange of ideas in our small discussion group made me understand content deeply enabling me to do well*’. However some learners like Lnr 8 from sch 2 said he does not benefit much from discussion because they are usually brief and fast leaving concepts not clarified. None the less, findings that discussion promotes understanding of content and provides learners with more ideas, resonate with the works of Lim et al (2024) that discussion expands learners’ understanding and thinking capacity, hence enhances learning outcomes; also Rai Chhetri and Rigdel (2023) that learners obtain more ideas and also their learning needs are met.

## DISCUSSION OF FINDINGS

The results in Table 1 reveals that most of the teachers generally use the discussion teaching strategy in teaching geography however they apply the different aspects such as small grouping, large grouping and panel differently with each getting different responses. While this finding tends to show that the teachers preferred large group discussion it differs with that of Laal and Ghodsi (2020) who found that small group discussion grouping was more efficient and depended on clarity of lesson goals, assigning of roles to participants and setting of discussion time limits which lead to an increase in critical thinking, involvement in learning and communication skills among learners.

On the other hand, the finding in this study concurs with those of Chi and Wylie (2014), who found that whole class discussion provided experiences where learners build on one another’s ideas going beyond rote memorization hence deeper conceptual understanding. This is further stressed by the structure of large class discussion as presented by Brookfield and Preskill (2016) who intimate that it is an instructional process that involves a lot of teacher input starting by preparation and goal setting on what is to be achieved through discussion; initiating and facilitating discussion by posing open ended questions and encouraging learners to actively participate; use of summary to conclude discussion; and finally urging learners to reflect on influence of discussion on their understanding of concepts that are learned during the lesson.

The same is presented by Rosadi, Nuraeni and Priadi, (2020); Oyakhirome and Orheruata (2021) who have focused their work on discussion as a whole, with others (Adediran and Olayiwola 2020; Kaya and Polat,2023; Istfanus and Dakur,2024) specifying a given discussion technique as study topics. None the less, Gokhale (1995), seems to make a general observation without intimating which discussion format which when used then enables students engaged the actively in discussion hence acquiring higher cognitive skills which translate into higher and better performance in academic tasks.

## Summary of Findings

Summaries are as follows;

- i) Inferential statistics show that large group discussion is preferred to the other two forms of discussion namely small and panel groupings
- ii) It was established that teachers mainly use large group strategy to teach geography as shown in Table 1 by *strongly agree* and *agree* both at 75% response compared to a paltry 5% who generally affirmed that they use small group discussion during lessons.

## Recommendations

From the findings of this study, the following recommendations were reached:

- i) Given that the present study is limited to senior secondary schools in Nyakach Sub-County, similar studies could be carried out in other parts of the country to affirm or refute the conclusions reached.
- ii) Retool teachers on the importance of using the small grouping approach and encourage them to use it.
- iii) Sensitize teachers on the need to blend the three forms that is large group, small and panel methods of discussion in order to improve on the learning of and performance in geography.

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