

# A SURVEY OF DIFFICULT CONCEPTS IN TEACHING SENIOR SECONDARY SCHOOLS GEOGRAPHY IN JIGAWA STATE, NIGERIA

**Najib Abdullahi**

School of Preliminary Studies,  
Sule Lamido University Kafin Hausa, Nigeria

**Ahmed Abubakar**

School of Preliminary Studies,  
Sule Lamido University Kafin Hausa, Nigeria

**Aminu Hussaini**

Geography Department,  
Bayero University, Kano, Nigeria

## **Abstract**

*This study identified difficult topics in teaching senior secondary schools Geography in Jigawa state. The study sought to identify perceived Geography difficult concepts by Geography teachers, factors responsible for their perceived difficult. Three research questions guided the study. A survey research design was used. The population of the study consisted of 99 geography teachers. The sample consisted of 15 teachers drawn from fifteen secondary schools through random sampling procedure. The data were generated using Difficult Topics in Teaching Geography, Geography Teachers Questionnaire (DTTGGTQ). Frequencies and percentage were used for data analysis. Results obtained indicated that four Geography topics were difficult. Based on the findings it was recommended that teachers should practice the art of drawing map, field trip/excursion in their Geography classes for effective teaching and learning because students learn better when they are taken on field trips.*

**Key words;** Teaching concept, Geography, Secondary School, Students, Jigawa

## **Introduction**

Teaching and learning of any academic subject is sometimes associated with a number of problems ranging from scarcity of teaching and learning materials, problems of administration, shortage of infrastructural facilities, inappropriate method of teaching and many other obstacles that may hinder an effective teaching and learning (Mamman, 2008).

Researchers have noted that some concepts in Geography are not too easy to teach by teachers and to learn by students due to their difficult nature (Olubukola, 2015, Osodo, Chisikw, & Ongati 2010). Those concepts have the following characteristics; they are hard or difficult to understand by most of students and teachers. They require more efforts and skills before one can understand and solve them; they exist in both senior and junior secondary schools curriculum; such topics stimulate fear and anxiety in students. These are unpopular topics; students do not find examination in those concepts easy to cope (Olubukola, 2015)

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### **CORRESPONDING AUTHOR**

**Ahmed Abubakar**, School of Preliminary Studies, Sule Lamido University Kafin Hausa, Nigeria  
E-mail: abubakar85508@gmail.com

Students and teachers are prone to various difficulties in answering questions on such concepts. This is because they consist mostly of difficult topics which cannot be understood easily. These difficult concepts in Geography can be regarded as skipped topics because of the following reasons. Some teachers refuse teaching the topics deliberately because they themselves do not understand them. Those who venture to teach these concepts may leave it in a hurry and teach only the rudimentary aspect. These teachers fail to teach students how to solve questions relevant to the topics. Students avoid attempting questions set on such difficult topics especially if given a choice, (Olubukola, 2015). From these assertions, it can be summarized that students and teachers may have some difficulty in teaching and learning these Geographical concepts

However, Obasi (2010) state that, it is only a qualified teacher that knows when and how to present learning materials to students in such a way that it would encourage them to actively learn. Schools need dedicated Geography teachers in the school system. Teachers who teach not only Geography facts and techniques, but also inculcate the spirit of Geography and attitude of inquiry in the minds of students.

Oni & Olurundare (2015) state that in Nigeria teacher's attitude and student's lack of interest have been reported to be major factors responsible for students perceived difficulty in sciences. Olusegun (2014), in his study found that, in Nigeria, most Geography teachers usually employ conventional method (talk and chalk method) to teach the students the map reading, and is the difficult aspect of practical Geography. It is essential that these difficult concepts identified so that the anomaly can be quantified. The study thus focuses on investigation of the difficult topics in teaching geography and how to find appropriate solution to the identified problems.

### **Objectives of the study**

1. To identify the difficult topics perceived by teachers in teaching of Geography
2. To identify the factors responsible for their perceived difficult in teaching of some concepts
3. To identify the methods that can make Geography teaching more effective?

### **Research Question**

1. What are the difficult topics perceived by teachers in teaching of Geography?
2. What are the factors responsible for their perceived difficult in teaching of some concepts?
3. What are the methods that can make Geography teaching more effective?

### **Methodology**

Survey research design was adopted for the study, which attempted to obtain the perception of teachers on difficult topics in Geography. The survey research design was used to obtain personal and social facts, belief and attitude of the respondent (Oloyede, Okon, Okonkwo, & Salawu 2011). The population of this study comprised all the Geography teachers in senior secondary schools in Jigawa State.

**Table 1. Population of the study**

S/N	Name of zonal office or area	Number of Geography teachers
1	Birnin kudu	11
2	Birniwa	04
3	Dutse	09
4	Gumel	11
5	Hadejia	15
6	Jahun	07
7	Kafin Hausa	06
8	Kazaure	11
9	Ringim	16
<b>Total</b>	<b>09</b>	<b>90</b>

The sample size of the study comprised of fifteen (15) Geography teachers drawn from fifteen (15) secondary schools in the three (3) zonal offices in Jigawa state. The researchers used random sampling techniques to select three zonal offices in the state; with random sampling every member have an equal chance of being selected as the part of the sample. Random sampling was used to select 15 secondary schools. Five schools were selected in each zone and in each school selected one Geography teacher was used as a sample.

**Table 2. Sample of the study**

S/N	Name of the zone	Sample of SSS selected
1	Ringim	GDSS YAN DUTSE GDSS KIRI GDSS GUJUNGU GDSS DABI GGSS GARKI
2	Jahun	GDSS TSAKUWAWA GDSS HARBO GDSS JAHUN GDSS MIGA GDASS JAHUN
3	Gumel	GDSS MEDU GDSS DANLADI GDASS GAGARAW GDSS GUMEL GGASS DANZOMO
<b>Total</b>		15

The main instrument used to collect data for the study was, "Difficult Concepts in Teaching Geography Students Questionnaire" (DCTGTQ) constructed by the researchers. The questionnaire consisted of the different topics for the teachers to select the most difficult topics to teach. Factors responsible for difficulty and how to make teaching of difficult concepts effective were also considered.

To validate and see whether the instrument would measure what was expected to measure, the questionnaire was taken to experience Geography teachers at senior secondary schools, educational researchers at university in order to make an input. Their expert opinion was used to determine and ascertain the content validity of the instruments.

The researchers visited each of the selected schools and got consent from the Principals. The questionnaires were directly administered by the researchers, the Geography Teachers. The researchers explained to the respondent on the areas where they did not understand. The questionnaires were collected after the respondents had completed. For the purpose of presentation, summary and analyses of this research, the information collected were analyzed using frequencies, table and percentages.

**Results**

The result of this study was presented based on the research questions.

**Research Question one:**What are the difficult topics perceived by teachers in teaching of Geography?

**Table 3. Perceive Difficult Concepts in Geography by Geography Teachers**

SN	Items	Difficult (F)	Percentage (%)	Not Difficult (F)	Percentage (%)
i.	Map reduction	2	13.3	13	86.7
ii.	Map enlargement	2	13.3	13	86.7
iii.	Measurement of the required length	4	26.7	11	73.3
iv.	Measurements using rulers	4	26.7	11	73.3
v.	Conversion of scale	4	26.7	11	73.3
vi.	Map distance to ground distance using the scale.	3	20	12	80
vii.	Drainage of the mapped area	4	26.7	11	73.3
viii.	Unit of measurement of annual rainfall	3	20	12	80
ix.	Calculation of mean annual rainfall	3	20	12	80
x.	Draw the length and breadth of the new map	3	20	12	80
xi.	Represent the data in graphical form.	3	20	12	80
xii.	Draw the cross profile.	12	80	3	20
xiii.	Mode of formation of Block Mountain.	2	13.3	13	93.3
xiv.	Springs and caverns	9	60	6	40
xv.	Negative activities of man on soil	2	13.3	13	86.7
xvi.	Formation of clouds	0	0	15	100
xvii.	Effects and control of drought	1	6.7	14	93.3
xviii.	Settlement patterns	0	0	15	100
xix.	World population growth	0	0	15	100
xx.	Factors that promote trade among countries.	1	6.7	14	93.3
xxi.	Factors that encourage internal trade in Nigeria	0	0	15	100
xxii.	Features of local craft industry	2	13.3	13	86.7
xxiii.	Features of manufacturing industries.	0	0	15	100
xxiv.	Drawing an outline map of Nigeria and locate places	4	26.7	11	73.3

Table 3 shows that out of the 15 teachers 12 (80%) perceived the concepts of cross sectional drawing as difficult, 9 (60%) of Geography teachers perceived the concept of spring and cavern as difficult to teach in Geography, 4 (26.7%) perceived the concepts of drawing a good outline map of Nigeria and locate places, 4 (26.7%) perceived the concepts of Measurement of the required length, 4 (26.7%) perceived the concepts of Measurements using rulers, 4 (26.7%) perceived the concepts of Conversion of scale, 4 (26.7%) perceived the concepts of Drainage of the mapped area, 3(20%) perceived the concepts of Represent the data in graphical form, 3(20%) perceived the concepts of Draw the length and breadth of the new map, 3(20%) perceived the concepts of Calculation of mean annual rainfall, 3(20%) perceived the concepts of Unit of measurement of annual rainfall, 3(20%) perceived the concepts of Map distance to ground distance using the scale. While the concept of settlement pattern, world population growth, and the concept of features of manufacturing industries ranked as the least difficult to teach.

**Research Question Two:** What are the factors responsible for their perceived difficult in teaching of some concepts?

**Table 4. Factors Responsible for Difficulties of some Concepts in Teaching Geography**

SN	Items	SA	%	A	%	SD	%	DA	%	Total
2.	Some topics in Geography required calculation that is why is difficult to teach it?	4	26.7	6	40	00	00	5	33.3	15(100%)
3.	Geography consists of so many issues or topics to teach and learn?	2	13.3	10	67	00	00	3	20	15(100%)
4.	Do you see that Inadequate use of instructional materials in Geography teaching make some topics difficult?	00	00	13	86.7	00	00	2	13.	15(100%)
5.	Some topics in Geography require drawing that is why is difficult to teach it?	00	00	8	53	00	00	7	47	15(100%)
6.	Do you organize a field trip to teach your students difficult topics?	00	00	3	20	00	00	12	80	15(100%)
7.	Do you organize group discursion for the students to discourse difficult topics in Geography?	00	00	7	47	00	00	8	53	15(100%)

Table 4 shows the various factors responsible for the difficulty of teaching geographical concepts. The highest factors for the difficulties were 13 (86.7%) of the respondent teachers agreed that Inadequate instructional materials in Geography make some topics difficult, 10(67%) of the teachers agree that Geography consists of so many issues or topics to teach, and 8(53%) of the teachers agree that Some topics in Geography require drawing that is why was difficult to teach, 12(80%) disagreed that teachers do not organize a field trip to teach their students difficult topics, 8(53%) disagreed that some teachers do not organize group discursion to teach their students

difficult topics in Geography, those are some of the factors responsible for the difficulties in teaching some geographical concepts in Geography.

**Research Question Three:** What are the methods that can make Geography teaching more effective?

**Table 5. How to Overcome the Difficulty in Teaching Geography**

S/N	Items	SA	%	A	%	SD	%	D	%	Total
8.	Are the instructional materials helps to teach difficult concepts in Geography?	10	66.7	5	33.3	00	00	00	00	15(100%)
9.	Does field trip help in teaching difficult concepts in Geography?	11	73.3	4	26.7	00	00	00	00	15(100%)
10	Does the seminar, workshops or conferences on teaching Geography helps to reduce the difficulty of some concepts in Geography?	05	33.3	10	66.7	00	00	00	00	15(100%)
11	Do you see that when you give your students assignment, project or map to draw can reduce difficulty in teaching and learning some topics in Geography?	05	33.3	07	46.7	00	00	03	30	15(100%)
12	When students are solving some Geography questions can learn the difficult topics with less difficulty?	08	53.3	07	46.7	00	00	00	00	15(100%)

Table 5 indicate that 10 (66.7%) of the teachers strongly agreed that instructional materials helps to teach difficult concepts in Geography, 11(73.3%) strongly agreed that field trips helps to reduced the level of difficulty teachers experiences while teaching Geography, 10(66.7%) agreed that teachers attending to seminars, workshops reduce the difficulty of some concepts, 7(46.7%) agreed that given students assignment, project or map to draw can reduce difficulty in teaching and learning some topics in Geography, 8(53.7%) strongly agreed that practicing of previous work or solving past geography questions can helps teachers to teach difficult concepts with less difficulty.

**Discussion**

The result of this study was discussed based on the three research questions

The finding of research question one in table 3 are in line with that of Susan and Carol (2014); found that the concepts of structure and shape of the earth were difficult. Joseph and Francis (2014) who found that earth and solar system, rotation and revolution, change in time and spatial orientation were perceived as the most difficult topics in Geography curriculum. The results also agreed with that of Osodo et al., (2010) who found that teaching and learning of Geography was associated with certain difficult concepts such as vulcanicity, the earth and the solar system and mass wasting. However, Adegun and Adegun (2013) and Olubukola (2015) identified the concept of longitude and latitude, bearing and distance as difficult concepts in Geography.

The finding of research question two in Table 4 are in line with that of Fatih (2011) who found that there were many issues in Geography that are based on memorization which make some concepts in Geography difficult (i.e. mountains, pleatau, line of longitude and latitude, vulcanicity). Hibszer (2011) found that Geography has too many facts to remember (i.e. location of places, geological formation) that is why some students and teachers perceived it as difficult. Gongden, Gongden, & Lohdip (2011), also identify that, insufficient explanations and practical works, numerous topics in mathematical and lack of interest on the parts of students were some of the reasons causing the difficulties in science subjects. These findings are also in line with that of Sofoworo & Egbedokun, (2010) who assert that the study of Geography from its inception was through verbal description of geographic features, which made the study abstract and quite uninteresting.

The finding of research question three in Table 5 are in line with that of Sofoworo & Egbedokun, (2010) belief that the application of appropriate media/ materials in teaching can help to solve the problems faced in the teaching and learning of Geography. It is a long belief in Educational Technology that media/ materials are essential for effective learning. Ali (2012) found that students learning of subject matter with deeper understanding may not take place in the classroom rather in an isolated fashion. Ali believes that in-depth learning is closely related with various conditions inside and outside the classroom environment. This will enhance the use of field trips, excursion, and practical. Kagoda (2009) found that group discussion developed in students a personal interest and expertise in Geography. Ubaka & Wilson (2008) opine that taking students out of the classroom to visit areas of interest will help to bring abstract ideas into life. The West African Examination Council Chief Examiners report (2006) states that adequate practice of drawing and location of features on maps and practicing the art of plotting graphs will lead to better performance and will solve this anomaly.

### **Conclusion**

This study revealed that teachers perceived the concepts of cross sectional drawing and, spring as difficult topics. The finding also showed that inadequate use of instructional materials in Geography, many topics to teach, Some topics in Geography require drawing, some of difficult topics required calculation are the factors responsible for the difficulties of teaching and learning of some geographical concepts.

To overcome these difficulties and make Geography teaching and learning effective, the respondents suggested that adequate use instructional materials, field trips, seminars, workshops, adequate practice of drawing and location of features on maps and practicing the art of plotting graphs will help the teachers to teach difficult topics in Geography effectively.

### **Recommendations**

1. Teachers should practice the art of drawing map and diagrams in teaching Geography concepts.
2. Teachers should practice field trip/excursion in Geography classes for effective teaching and learning because students learn better when they have been taken to field trips.
3. Teachers should adequately use instructional materials in their teaching and to improvise where necessary.
4. Government should organize seminars, workshops for Geography teachers to understand different method of teaching difficult topics.

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