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Secondary School Learners Perception on Effects of Instructional Materials in Performance in Geography

Research Article

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Abstract:

This study is an investigation into the effects of instructional materials in performance of students in teaching and learning geography in secondary schools in Kathmandu district. The design of this research study is survey research design. Three secondary schools are selected for the study. The population of the study comprises all the students of government secondary schools in Kathmandu district. Among the students, fifty students in selected schools are selected by lottery method. The primary data are collected through a survey questionnaire. A Likert scale mean is used with assigned value 4,3,2,1 for strongly agreed, agreed, disagreed and strongly disagreed respectively. An average of 2.5 is used to determine the mean which are obtained through method of finding mean of an under grouped data. This mean that any score equal to and more than 2.50 is considered as agreed response and any mean score less than 2.49 was considered as disagreed responses in this study. The findings of the research reveals that instructional materials have effects students' performance in the teaching and learning geography in secondary schools.

Keywords: Likert scale, teaching and learning, performance, geography, instructional materials

INTRODUCTION

Geography has a longer history than any other sciences. The first use of the term geography is credited to Eratosthenes, a Greek scholar during the third century B.C. (Demko, 1992). Geography has separate and recognizable existence as an academic discipline over 2000 years. The development of geography has never been smooth. It is a story of upheavals and downfalls. With time, the definition, nature, scope, techniques and methodology of geography have changed, refined or even discarded. Geography is defined as the study of spatial location and distribution of various phenomena on the surface of the earth. Geography is unique discipline in bridging the social sciences with the natural sciences.

William D. Pattison espoused the four tradition of geography at the opening session of the annual convention of the National Council for Geographic Education, Columbus, Ohio in 1963 (Sapkota, 2017). His four tradition are spatial tradition, area studies tradition, man land tradition and earth science tradition. The five themes of geography are location, place, human environment interaction, movement and region. These tradition were defined in 1984 by the National Council for Geographic Education and the Association of American Geographers to facilitate and reorganize the teaching of geography. Hanson (2001) assembled a distinguished group of geographers to write about ten important geographic ideas. These ten ideas are the idea of map, the weather map, GIS, human adjustment, water budget climatology, human transformation of the earth, spatial organization and

interdependence, central place theory, megalopolis and sense of place.

The teaching of geography at the school level started at Durbar High School, Kathmandu in 1901. Geography was considered as one of the eight papers with 100 marks in the curriculum and it carried a weight of 12.5 percent with the establishment of School Leaving Certificate Board in 1934. (Dhakal, 2014). Nowadays, geography is placed as one of the optional papers in secondary school. Geography is included in social studies at the basic level and placed as one of the optional papers in secondary school. Geography is not remaining as a popular subject among the students in Nepal. The result is the declining number of geography students in the secondary school classrooms. This shrinking of geography at the school level has not only deprived school graduate but it has also limited the scope of the discipline in higher education in Nepal. There are so many problems in teaching geography in secondary schools such as instructional materials, reference books, curriculum, textbooks etc. (Dhakal, 2014).

Teaching concerns with the activities of facilitating learning. Teaching is also said to be a vehicle for transferring knowledge from one generation to next generation. The aim of teaching is not only to transmit information, but also to transform students from passive recipients of other people's knowledge into active constructors of their own and others knowledge. According to Merriam-Webster dictionary learning can be defined as the activity or process of gaining knowledge or skill by studying practicing, being taught, or experiencing something. Learning is about what students do, not about what we as teachers do.

According to Bello (1999) instructional materials are varieties of equipment and materials they have instructional values that are simultaneously used with the teacher's voice to facilitate learning. These materials play the role of a stimulant in teaching and learning process. The importance of quality and adequate instructional materials in teaching and learning can occur through their effective utilization during classroom teaching. For the effective teaching of geography, it is necessary for teachers to prepare and use of different types of instructional materials. Geography focuses on disciplinary change and paradigm shift which needs the use of instructional materials important in teaching and learning. Successful implementation of any curriculum is almost fully dependent on the quality and quantity of instructional materials available to teachers and students for use in school (Usman and Adewunmi, 2006). The major school based factor which is influencing the performance of learners is inadequate instructional materials in classroom (Dhakal, 2014).

Instructional material theories assumes that there is direct link between the materials that have the teachers use and the student's learning outcomes. These outcomes include higher abilities to learn, quality strategies to learn and perform classroom activities and positive attitudes towards learning. According to Gagne et al (2005) instructional materials can be used to develop higher learning abilities to the learners through self-teaching or guided learning. According to Olawale (2013), instructional materials include used to facilitate learning for better result. There is statistical significance in the educational performance of students when they are taught with instructional materials than when they are not taught with them (Ifeoma, 2013). In his study Adeogun (2001) revealed a strong positive link between instructional resources and academic performance. According to him, schools that possess more instructional resources performed better than schools that have less instructional resources. This finding supported the study by Babayomi (1999) that private schools performed better than public schools because of the availability and adequacy of teaching and learning resources.

The research is guided from the research question, what is the effect of instructional materials on the performance of students toward learning of geography? The purpose of the study is to determine the effect of instructional materials on student's performances in geography in secondary schools. This study will be helpful to classroom teachers as it will make a good clarification on the utilization of instructional materials on the teaching and learning of geography in secondary school.

METHODS AND MATERIALS

The design of this research study is survey research design which is aimed to find out the effect of instructional materials on teaching and learning of geography among selected secondary schools. A survey research design is the study which enables the research to obtain the required answer to the research questions. The schools offering geography in Kathmandu district as an optional subject were identified. Out of sixteen community schools offering geography as an optional subject three schools were selected for the study on the basis of random sampling. The population of the study comprises all the students of government secondary schools in Kathmandu district. Among the students, fifty students in selected schools were selected by lottery method. The sample for this study comprised of fifty students from selected secondary schools. The secondary data were acquired from the review of the published and unpublished and electronic materials. The primary data were collected through a survey questionnaire. A Likert scale mean was used with assigned value 4,3,2,1 for strongly agreed, agreed, disagreed and strongly disagreed respectively. The mean was determined with the following formula.

$$X = \frac{\sum FX}{N}$$

Where X = mean

F = frequency

X = normal value of an action

$\sum$ = Summation Sign

N = number of respondents

An average of 2.5 was used to determine the mean which were obtained through method of finding mean of an under grouped data.

$$\text{Mean} = \frac{4+3+2+1}{4}$$

$$= \frac{10}{4}$$

$$= 2.5$$

This mean that any score equal to and more than 2.50 was considered as agreed response and any mean score less than 2.49 was considered as disagreed responses in this study.

RESULTS AND DISCUSSIONS

The instructional materials used in classroom provide the basis for what students can learn and what teachers should teach. These materials are providing students and teachers with a foundation for performance and successful teaching and learning. The researcher wanted to explore the views of students on the extent to which instructional materials affect student's performances in secondary level geography. The geography students were asked to state the use of instructional materials helps them to be familiar with teaching and learning of geography

TABLE 1- Instructional materials make familiar with teaching and learning

Variable	SA	A	DA	SD	Total
Frequency	22	20	8	0	50
Mean			3.28		
Remark			Agreed		

The study revealed that out of 50 student respondents participated in the study, 22 respondents strongly agreed, with the statement that use of instructional materials helps the students to be familiar with teaching and learning of geography, while 20 respondents agreed and 8 respondents disagreed with this statement. None of the respondents strongly disagreed with this statement. The mean was obtained was 3.28 which is above the average point. In this study, it can be concluded that the use of instructional materials helps the students to be more familiar with the teaching and learning of geography.

According to Hall (2010), the classroom must be comfortable for the teacher to give his best and the students to learn effectively. According to him, the

provision of instructional materials to the teacher will enable him/her to teach and manage the class effectively. The geography students were asked to state the use of instructional materials help in classroom management in teaching and learning of geography. Table two below represents the responses of the instructional materials help in classroom management.

TABLE 2- Instructional materials help in classroom management

Variable	SA	A	DA	SD	Total
Frequency	20	15	10	5	50
Mean			3.00		
Remark			Agreed		

The study revealed that out of 50 student respondents participated in the study, 20 respondents strongly agreed with the statement that use of instructional materials helps help in classroom management in teaching and learning of geography, while 15 respondents also agreed and 10 respondents disagreed with this statement. Only 5 respondents opined as strongly disagreed with this statements and the mean obtained was 3.00 which is above the average point. It can be concluded that the use of instructional materials help in classroom management in teaching and learning of geography in classroom.

Instructional materials have been observed as a powerful strategy to bring about the effective teaching and learning. The importance of quality and adequate instructional materials in teaching and learning can occur their effective utilization during classroom teaching (Tetty, 2016). The geography students were asked to state the use of instructional materials play a major role in teaching and learning of geography. Table three below represents the responses of the instructional materials playing major role in teaching and learning of geography in secondary schools.

TABLE 3- Instructional materials play role in teaching and learning.

Variable	SA	A	DA	SD	Total
Frequency	20	17	9	4	50
Mean			3.06		
Remark			Agreed		

The study revealed that out of 50 student respondents participated in the study, 20 respondents were strongly agreed with the statement that use of instructional materials play a major role in teaching and learning of geography while 17 respondents were also agreed and 9 respondents were disagreed with this statement. Only 4 respondents were opined as strongly disagreed and mean obtained was 3.06 which is above the average point. It can be concluded that use of instructional materials play a major role in teaching and learning of geography.

Instructional materials are essential and significant tools needed for teaching and learning in order to improve students' performance. The geography students were asked to state the instructional materials as a medium of transfer of learning and teaching of geography. Instructional materials are immediate or mediating materials used in instruction or teaching learners so as to make the learning objectives clearer and teaching easier (Dhakal, 2017). The geography students were asked to state use of instructional materials make teaching and learning of geography easier and effective. Table four below represents the responses of the use of instructional materials make teaching and learning of geography easier and effective.

TABLE 4- Instructional materials make teaching and learning easier and effective.

Variable	SA	A	DA	SD	Total
Frequency	20	18	7	5	50
Mean			3.06		
Remark			Agreed		

The study revealed that out of 50 student respondents in the study, 20 respondents strongly agreed with the statement that the use of instructional materials make teaching and learning of geography to be easier and effective while 18 respondents agreed and 7 respondents were disagreed with the statement. Only 5 respondents were opined on strongly disagreed and the mean obtained was 3.06 which is above the average point. It can be concluded that the use of instructional materials make teaching and learning of geography to be easier and effective.

The geography students were asked to state the students understand geography better when instructional materials are used in teaching and learning. Table five below represents the responses of the students understand geography better when instructional materials are used in teaching and learning.

Table 5- Students understand geography better when instructional materials are used.

Variable	SA	A	DA	SD	Total
Frequency	24	15	7	4	50
Mean			3.18		
Remark			Agreed		

The study revealed that out of 50 student respondents participated in the students understand geography better when instructional materials are used in teaching and learning while 24 respondents were strongly agreed and 15 respondents were agreed with the statement. 7 and 4 respondents were opined disagreed and strongly disagreed respectively. The mean obtained was 3.18 which is above the average point. It can be concluded that the students understand geography better when instructional materials are used in teaching and learning.

Retention is the ability to store what has been learnt and recall what has been stored in the memory. Instructional materials also contribute to quality and level of retention in the students. The geography students were asked to state the students' knowledge is retained over a period of time when instructional materials are used in the classroom teaching. Table six below represents the responses of the students' knowledge is retained over a period of time when instructional materials are used in the classroom teaching.

TABLE 6- Knowledge is retained when instructional materials are used.

Variable	SA	A	DA	SD	Total
Frequency	21	18	7	4	50
Mean			3.12		
Remark			Agreed		

The study revealed that out of 50 student respondents participated in the study 21 respondents were strongly agreed with the statement that the knowledge is retained over a period of time when instructional materials are used in the teaching while 18 respondents were agreed and 7 respondents were disagreed with the statement. Only 4 respondents were opined on strongly disagreed and

the mean obtained was 3.12 which is above the average point. It can be concluded that the knowledge is retained over a period of time when instructional materials are used in the classroom teaching.

Students taught with instructional materials performed significantly better than those taught without instructional materials and also that the use of instructional materials generally improved students understanding of concepts and led to high academic achievements (Adalikwu & Iorpilgh, 2013). The geography students were asked to state use of instructional materials in teaching and learning of geography improve the academic performance of students. Table seven below represents the responses of the use of instructional materials in teaching and learning of geography improve the academic performance of students.

TABLE 7- Instructional materials improve the academic performance.

Variable	SA	A	DA	SD	Total
Frequency	25	16	6	3	50
Mean			3.26		
Remark			Agreed		

The study revealed that out of 50 student respondents participated in the study, 25 respondents were strongly agreed with the statement that the use of instructional materials in teaching and learning of geography improve the academic performance of students while 16 respondents were agreed and 6 respondents were disagreed with the statement. Only 3 respondents were opined on strongly disagreed and the mean obtained was 3.26 which is above the average point. From this study it can be concluded that the use of instructional materials in teaching and learning of geography improve the academic performance of geography students.

CONCLUSIONS

The findings showed that the role and the effectiveness of instructional materials in teaching and learning geography have positive influence on the academic performance of geography students in secondary schools in Kathmandu district. Instructional materials help to improve teaching and learning process in secondary level geography classroom. Instructional materials also help to sustain the interests of the students in classroom and make retention to the students in the teaching learning process. By the proper utilization of instructional materials students capture the true picture of subject matter what is taught by the teacher. The study conclude that instructional materials are important variable in determining the academic performances of the secondary level students.

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