

Chapter I

Introduction

Background of the Study

Nepal is a multi-racial, multi-lingual and multi-religions country. Here are different types of people having different races and language living together in the thread of unity. They have their own culture, language, customs and rituals and art. According to population census (2011) there are 125 castes and 123 languages in Nepal.

Raute is one of the most primitive tribe that has been living in the Jungle as a nomadic tribe even in the modern scientific and technocratic age. They have their own existence, identity and lifestyle. Raute is one of the marginalized and extinct tribe living permanently in the hilly Jungle of province no. six and seven. There is not written history about Raute, up to now. It is said that their origin or habitat is at Deuthala of Darchula district. They are the ancestors of Pal Thakuri of Darchula district. The eldest brother was the grandfather of Raute and youngest brother has the grandfather of Pal. After the death of their father the youngest brother handed two-pitcher wealth to the elder brother and he kept three pitcher of wealth with himself. At this the elder brother became angry with the younger brother and went to the Jungle. It is said that he threw his property in to Bhamalya river. After that people called him Raute or Raut. They introduce themselves as Rajwar now. They don't wear holy-thread although call themselves as Thakuri such as Pal, Raskoti, Kalel etc. Shahi(2000).

The nomadic Raute live in the hut made of green branches and leaves. Some of them reside in cave and den. They burn their houses when they leave the place. They don't return back at the same place again. If they do it, it will be after 10-12 years.

Raute female stay at home and look after their children. They deal with most of the home activities when as made go out to hunt and do physical toil. They use the water from the origin of the river, stream or the spring. Their major food is the meat of monkey. They eat Yam, fruits, and so on as major food. They don't like milk and curd. They drink alcohol, liquor and homemade Khaini female use hukkha to smoke. The nomadic Raute don't like farming or cultivation. They think crop-growing as a sin.

In between 2036 and 2039 B.S., Nepal Government had provided 1.5 Bigha land to each Raute family in Dadeldhura and Darchula district. They do farming, carry loads, sell firewood and till others land to earn money for their permanent settlement government helped them to reside in Aampani and Rajuda of Dadeldhura district.

Raute believe in traditional cure system like Dhami, Jhakri (witch-doctor) and herbal medicine, clothes from Vorla, Sunpat and Jute. They make different types of home appliances like box, bed, bucket, glass, bowl, theki etc. from, Tuni, Sallo, Simal, Vijaya Saal. They exchange these products with crops and clothes. Hunting is their ancestral occupation. They call themselves as the king of the Jungle. They kill violent animal like tiger, bear, snakes but not deer, peacock, etc. thinking that they are the decorative animals and birds of the Jungle. They don't eat meat in front of other people except Raute thinking that their gods and goddess become angry. They live in the Jungle of Kalikot, Dailekh, Jajarkot, Bardiya, Surkhet and Dang as a primitive nomadic tribe. Their language and face are as Mongolian. They call themselves as Thakuri, like Pal, Shahi, Kalyal, Chand and Malla.

They have a Mukhiya, major post of Raute tribe. They all follow the order of Mukhiya. They migrate from one place to other place to find out prey and

eating'seasily. If any member dies, they have to burn and marriage and intercaste, marriage most of the marriages are within same caste.

Rautes have got their own unique culture, ritual and art. They play Madal (Tomtom) in different celebrations and festivals. They dance and sing. Their major festivals are BaisakhSakranti, BhadraSakranti, and MakarSakranti. They burn goat or he-goat tying legs and throwing into the burning fire. They don't want to touch money they think that if king touches money its sin. They don't tell other people about their number of family members. They are Hindu. They worship Bhaiyar, Daremasto, Bir, Samajji, Ghatal, Panju, Kedar, Ghanenath, Manainath, Bhagwati, Para, Hunsakar, Betal, Chhine and Gharmule. Some Rautes worship Nga snake-god. They also call themselves as the generation of God Bishnu.

Rautes don't want get education. They have oral education. They have their own language and magic's but not scripted. They learn everything from their ancestors. They have their own rites social system rule and regulations. They are tall, stone and well-built body, some of them are small. They don't like comb hair. They have small eyes and puffed face. They use 'Kham' language it is related to Bhot-Barmelilanguage. Rauteweare 'Khada' and Kachhad. These are hand-made clothes. Then wear aluminum and iron-made ornament. They are simple and humble. They are honest. They don't want to take anything from other without working. They don't like to save and deposit property. Other people call them as Jungle man, Jungle king, Ban Rawot, Raji, Raut, Rautya, Raute etc. The leader is called Man Bahadur. It is not a name it's a post. He keeps long holy hairs on his head. Nepal (1997).

Government had established Basic level schools in Aampani and Rajauda in Dadeldhura district for Rautes educations in Aampani there are 42 and in Rajuda there are 43 Raute students in schools. Some of the Raute are adopting modern life leaving

nomadic life style. Government has also implemented different types of incentive programs for marginalized tribes. Government has provided them Rs. 2000 per month as social security allowance. However, their life has not been changed completely. Their economic and social condition is so poor. Rautes believe that their god and goddess become angry when they adopt modern life style and send their children to school. They are conservative and superstitious too.

Mathematics is one of the most important subjects in school education. In all major (formal life or official work) and minor (household works) activities of life such as selling, purchasing in the market, arranging party, joining profession, celebrating marriage etc. indicates the importance of mathematics. The statement "Mathematics is the gate and key to all sciences." (Bacon) emphasizes its importance and use in many fields, mathematics has close relationship with human life and is related to many social subjects like economics, population, sociology, physics, chemistry. So, mathematics should be so easy that everyone can easily learn it. But, the statement of NCTM (1989): "The social injustices of past schooling practices can no longer be tolerated. Mathematics has become a critical filter for employment and full participation in our society. We cannot afford to have the majority of our population mathematically illiterate. Equity has become an economic necessity." indicates the villain role of mathematics that filters pupil which generates negative attitude of the students toward mathematics (Upadhyay, 2068 B.S.).

"Mathematics for all" is the main theme of ICME VI. To make this slogan significant, every people should be mathematically literate. But different researches shows that mathematics is considered as a difficult subject and most of the student fear of it. Mathematics has negative image in our society. Children tend to view mathematics as a cut- and- dried, esoteric subject that arose full blown from the

minds of a few great men in the past. It is not surprising that many students find mathematics irrelevant, develop fear and anxiety about the subject, and drop it as soon as possible.

Thus learning as permanent change in behavior and depends in practice and observed. It is a lifelong process. It is the product of environment, discovery and continuous process and it last until the death of learner.

Student who have same cultural back ground do not face such problem in learning strategy at school and home. They also feel mathematics as the difficult subject. Raute students who have not same cultural background face so many difficulties in learning mathematics due to which they get low achievement in mathematics, which can be shown by the result of grade V students as follows:

Name of Students	Marks Obtained in Math
BikramRaute	18
Ganga Raute	6
PadamRaute	9
ManojRaute	5

(Source: School Report, 2074)

Almost all Raute students are failed in mathematics. Their school dropout problem is high. Most of Raute children's study up to eight classes than after they leave the school. Therefore, therefore the researcher tries to identify the difficulties of learning mathematics and impact of home environment of Raute students in learning mathematics at primary level.

Statement of the Problem

The study was concerned with the study of difficulties in learning mathematics of Raute children at primary level. The study also concerned the teaching methods used by teacher, use of instructional materials, interrelation between the teacher and students. The study intended to find the causes of the high failure rate of Raute students, reasons behind their high dropout rate. The researcher intended to find out the difficulties faced by the students of Raute community in learning mathematics and compare their achievement with the students from other caste students.

This study is mainly concerned about the study of difficulties in learning mathematics of Raute children at Primary level. Raute People fall under Privilege group of the society discriminated, humiliated and disadvantaged socially, economically, culturally and politically in the society by the other caste people and the state policy. Their children have low achievement in mathematics class in comparison to other caste students. The following are the main research questions for the study:

- What are the difficulties of Rautechildren's in learning mathematics?
- Why do the Raute children feel difficulties to learn mathematics at Primary level?

Objectives of the Study

The objective is the main part of the research. A researcher can't reach his goal without concrete objectives. Following are the objective of the study:

- To explore the difficulties of Rautechildren in learning mathematics at Primary level.
- To find the causes of difficulties in learning mathematics.

Significance of the Study

Mathematics is the essential part of human civilization. Nepal is a multilingual, multicultural, and multiethnic country. Mathematics has been a key subject in school curriculum throughout the world. In our country it has been taught from primary to secondary level as compulsory subject and also as major subject. Mathematics learning helps the students to understand and to interpret the important quantitative aspect of the living. This is possible only when the identify the difficulties of learning the different part of mathematics like mathematics, algebra, geometry etc.

This study was concerned with the difficulties in learning mathematics of children at primary level in Dadeldhura district. This study tries to identify the difficulties of Raute children at primary level and to identify the impact of home environment in learning mathematics of Raute students. The following are the significances of this study.

- This study would help Rautechildren to open the door for the further study in problem of mathematics learning.
- This study would help to mathematics teacher at classroom while teaching mathematics.
- This study would use to minimize the difficulties in learning mathematics of Rautechildren at Primary level.
- Finding of this research would also help to the curriculum designer while designing the mathematics curriculum for them and other stakeholders related to the field of Mathematics Education.
- Its finding would help to improve the mathematics achievement of Raute children's.

Delimitation of the Study

This is a case study about difficulties in learning mathematics of Raute children at primary level. The study has following delimitations.

- This study was limited to the lower secondary school of Dadeldhura District, Parashuraam Municipality, 4 Rajauda.
- This study was concerned only with difficulties faced by Raute children of mathematics in grade five.
- The primary data for the researcher was collected by class observation and interview schedule.

Definition of the Related Terms

Some terms related to this study were defined and explained operationally in the following paragraph.

Raute. The name comes from the shed they fabricate. Such makeshift is called Raut. Rautes are the most confirmed nomadic tribe of Nepal who forage for tubers and fruits and hunt animals for their living. They are indigenous of the dense forests in the districts of Dailekh, Jajarkot, Surkhet, Salyan, Achham, Jumla, Dadeldhura, Dharchula etc. They seldom live in one place for more than two months at the most. Therefore, they have not taken up farming yet. They speak Khamchi language of the Tibeto-Burman family, and worship nature. They intermarry within their close clans.

Nomadic. People who move from one place to another place. The nomadic Raute live in the hut made of green branches and leaves. Some of them reside in cave and den. They burn their houses when they leave the place. They don't return back at the same place again. If they do it, it will be after 10-12 years.

Tribe. Group of people having similar caste culture and customs. Rautes have got their own unique culture, ritual and art

Primitive. Of ancient time. Raute is one of the most primitive tribe that has been living in the Jungle as a nomadic tribe even in the modern scientific and technocratic age. They have their own existence, identity and lifestyle. Raute is one of the marginalized and extinct tribe living permanently in the hilly Jungle of province no. six and seven

Hunting. Prey or kill animals with weapon for meat. Hunting is their ancestral occupation. Rautes call themselves as the king of the Jungle.

Difficulties in learning. It is a general term which refers to children or students whose experience difficulties with their learning. Learning difficulties in obstruction, in learning of mathematics in which students feel due to communication interaction pattern & behavior participation & learning opportunities at home & school.

Participation. In this research participation means regularity in classroom, interaction with teacher and friends, completion of homework and classwork etc.

Cultural discontinuity. Cultural discontinuity is the lack of regularity or sequence or gap of home culture and school culture.

Interpersonal relation. Interpersonal relation means relation between Raute students and other caste students.

Chapter II

Review of Related Literatures

The related studies of construct the platform for standing to the research of the subject which gives the theoretical support for the study. Review of related literature is an exactly task is calling for a deep insight and clear prospect of over all fields. In this chapter different literature relevant to causes of difficulties in mathematics learning have been reviewed in order to know about their causes. The main purpose of review of related literature is to find out what works have been done to the area of study being under taken. It helps to conduct the new research study and avoids the necessary duplication. Mainly the literatures were previous thesis, books, journals and internet etc. (Khanal, 2010).

There are two types of literature which is empirical literature includes the different researcher in problem faced by the learning mathematics and theoretical literature for understanding the learning mathematics. This chapter describes the empirical literature, theoretical literature and the framework of this study.

Empirical Literature

The review of the empirical literatures connects the systematic summary of scientific researches and real investigation including their topics, the reasons why this study is conducted, methods of the study, data collection tools and methods of confirming their validity and reliability, and major findings in the related field.

The major propose of the present study finds the difficulties of learning in mathematics of Raute children at primary level. There are so many research studies and related journals, reports. So researcher will review these studies in order to explain the problem of the study. They are as follows.

Adhikari (2006) did a study on "Cultural Discontinuity and Difficulties in Learning Mathematics of Dalit Students". The objectives of this study were to identify the causes of difficulties in learning mathematics at school, influence factors in learning mathematics, impact of home environment. The study was done on four Dalit students. In-depth interview, observation form, written documents were main tools and school culture. The home environment is not supportive for mathematics learning.

Dahal (2011) did a research on "causes of low achievement in mathematics of Magar students" (A case study in Kaski district). The objectives at this study to explore the causes that bring low achievement in mathematics and identify the strategies taken by school in improving mathematics achievement of Magar students. He collected the data from interview, observation, field documents. His study was based on qualitative research approach. This study shows that most of the Magar parents were illiterate and they use their children as a means of earning to support their family, teacher centered method, household work, motivation, the teacher used to give homework daily but students were facing the problem in delay of checking the copies and language were the causes of low achievement in mathematics of Magar students.

Finally, he concluded that parent illiterate, language is the one of the obstacle for students. At last, he said that there should be the provision of teaching mathematics to the students of primary level in their mother tongue as well as in Nepali language.

Dhami (2012) has done research on the topic "impact of socio-economic status on mathematics achievement of Tharu students. The objectives of the study were to find out the relation between socio-economics status in mathematics achievement of Tharu students. An achievement test paper is the main instrument including

questionnaire from for parents and students. The students were chosen sample random process. He concluded that mathematics achievement of Tharu students found to be positively correlated with father's education. Factors occupation and family income.

Moreover, Ghimire (2005) has done research on the topic "Difficulty in learning Algebra a Case study of Blinded Students". The objectives of Algebra & to identify the difficulty on Classroom practicing. This study was conducted with the sample size of four blind students from four different schools. The children were selected on the basis of simple random process. Different tools such as case study, observation, interview & written test were applied to identify their learning difficulties on Algebra & inclusive education approach. The study found that the performance of blind student was very poor. They can define their concept & can solve such problems, which are very short & easily can remember to mainly the problem can solve on step. They were able to only add, subtract multiply of simple & very short Algebraic terms but unable to division & they have to the limited knowledge about the factorization HCF& LCM. The major difficulties of the blind students were found as to develop clear concept on subject matter, to write Algebraic terms & to solve process of Mathematical Problem in Braille Script. The lesson learn from this research can be used in special education. All these required a serious thought while making decision about curriculum, regarding materials & pedagogical process.

Thapa (2011) conducted on the topic "Participation and achievement of Dalit student's in lower secondary level". The researcher was used descriptive case study in nature followed by both quantitative and qualitative approach. He used questionnaire, observation and interview tools to collect data. The researching used percentage and mean in data analysis procedure. The major findings of the study were that the

participation level of Dalit students in lower secondary level was normal which was not satisfactory and the achievement level of Dalit students in lower secondary was also normal which was not satisfactory.

CERID (1990). Studied on "Elementary Process of Learning Mathematical Concept and Process of RasuwaTamang". The purpose of that study was to identify the basic mathematical concepts used by Tamang adult with no formal mathematics education, to identify traditional Tamangs method of mathematical operation and to find out the implication of Tamang process and tone up to the present learning situation. That project work has shown that the Tamang have their own mathematical processes and geometrical concepts. The study has also showed that the situation of children into the formal system. But it did not study the effect of ethno mathematics practices in the classroom setting.

Boulet (2007) has done research on the topic 'how does language the learning of mathematics'. The objectives of this study was to identify the impact of language in learning mathematics the study was to done on five grade teachers. In-depth interview and observation were the main tools and the student concluded that language plays a key role in the mathematics classroom. Much of the attention to mathematical discourse focuses on student's ability to communicate by clarifying and justifying their ideas procedures. The teacher's own use of language in the mathematics classroom servers as an important example of effective communication.

Wasonga (2005) entitled "Multicultural Education Knowledgebase, Attitudes and preparedness for diversity" has an aim to investigate the effect of multicultural knowledgebase on attitudes and feeling of preparedness to teach children from diverse backgrounds among pre-service teacher. As the major findings the results indicated that a class in multicultural education significantly increased knowledge about

diversity, attitudes toward multiculturalism, and levels of preparedness to teach children from diverse backgrounds. The findings showed that there was no correlation between multicultural knowledge and attitudes and between attitudes and preparedness to teach children from diverse background.

The above review documents, related to mathematics education have discussed the problems of multicultural and multi-lingual teaching and learning within the various western countries in particular. These documents show the simple and general results just focusing on student's achievement through statically analysis but fail to touch other influencing variables the teachers teaching strategy, method, motivation, feedback, multicultural and multi-lingual perspectives of classroom diversity.

Jens Holgerlorgenz models of teacher-student interaction have most frequently sprung from general thought. Some general features equally applicable to all school subjects are outlined in the class section. Teacher-student interaction is regarded form a cognitive point of views in the sense that teachers and students are mutually influencing subject in an interaction process which they interpret and anticipate while acting within a classroom.

Flanders interaction analysis system (1970) Flanders interaction analysis system emphasizes the teaching of the classroom teacher-student interaction which uses a system, taking into account the direct and indirect teaching style behavior classification of the classroom teacher-student behavior. FIAS is a classroom teacher-student interaction observation system of teaching.

Similarly, Ghimire (2012) has done research on the topic "Difficulties of Bote students in learning mathematics". The objective of this study as follows: to identify the difficulties of Bote students in learning mathematics at lower secondary school

level and to analyze major causes of difficulties in learning mathematics. This research study based on in-depth interviews with children, classroom observation, and observation of home environment and necessary to gain the teachers and parents perspective. The conclusion of this study was mathematics has some cultural influence Bote indigenous mathematics system differs from schooling mathematical system. So it instigates that their prior-knowledge about mathematical information can't match with curriculum mathematics so it makes them more puzzle.

Adhikari (2007) conducted in his dissertation "Learning cultural in mathematics classroom in an effective school". The factors responsible for making the typological of learning cultural of mathematics classroom are teacher awareness, students participation, learning environment of school, culture of recognizing individual cognitive style and Head teacher supervision. The student from economically marginalized and uneducated family has less opportunity to learn in home.

Aale (2012) has done research on the topic "Mathematics learning difficulties of Magar children at primary level". The main objective of this research were to analyze the role of cultural continuity of school and home culture in facilitating mathematics learning and to explain the individual and school strategies to address learning difficulty in mathematics of Magar students. This study was based on the qualitative research and case design where learning was case for this research that specially concerned with the exploring meanings and the way people understand. The tools of this study were semi-structured interview, observation form. This case study explained the role of instructional language used in mathematics classroom at primary level.

Teacher proposed understanding of multicultural issues in mathematics classroom at primary level must be the focused pedagogical consideration to improve mathematics learning and achievement is providing necessary learning opportunity through of home management. Janajati students were suppressed, it is very difficult for them to maintain social decorum in the society silly they can't go equally with their socio-culture norms and values.

The above empirical review documents related to mathematics education has discussed the problem of multicultural and multilingual teaching and learning in our and other various western countries in particular. These documents show we always statically analyze the result of students but not analyze how the result is poor. And also not analyze the different factors which influence the teaching learning activities and learner's interest on learning mathematics with multicultural, multiracial and multilingual perspective.

These documents also show simple and general results just focusing on student achievement through statically analysis but fail to tough other influencing variables such as teacher's teaching strategies, method, motivational tricks, feedback, multilingual and multicultural perspectives of classroom diversity.

From the above research it is concluded that the difficulties and challenges in learning mathematics at primary level. The main difficulties are home environment social factors (home culture and school cultural difference, language of school and home) and personal factors (time for learning and motivation) the main factors which influence in the learning mathematics.

Theoretical Literature

Theories which can be used for the analysis and interpretation of the data are classical social theory of learning, cultural theory, everyday life theory and cultural

difference/discontinuity theory etc. Some of the theories the researcher reviewed related to the research topic & relevant to the study are summarized below:

Cultural Difference and Discontinuity theory. The researcher had tried to explain the empirical evidences of the learning difficulties of Raute children's studying in early grade of basic school vanish this so a brief of underlay of than theory in discussed here.

Ogbu (2000) delineates about the cultural difference and cultural discontinuity theory that deal with the problem in children's learning caused by the difference and discontinuity between the culture of home and school. Those children, whose home cultures are much similar to the cultures of the school can, cope easily with the system that may result better learning achievement. Similarly, the children with unmatched or dissimilar home cultures with school cultures and they do not have enough attention in their learning and do not get much recognition of their cultures and they have to work achieving learning outcomes compared to the children with good matched.

Ogbu (2001) emphasizes learning not only as the product of the cultural and language differences but rather the nature of the relation between the culture and language of minority/ disadvantaged and dominant groups. The dominant group controls the school system through implementation of their curriculum, and using their language as the only means of instruction. Regarding cultural difference, identity and school learning, he has put the example on the case of the United States of America(USA).

Ogbu (2000) has emphasized on two types of cultural differences i.e. the primary cultural difference of voluntary minorities and the secondary cultural difference of involuntary (Caste like) minorities. As his study suggests, involuntary minorities force more difficulties in school learning and mainstream culture.

However, he developed the theory of cultural difference on the case of US; it might have implication to this study is related to cultural discontinuity and learning difficulties in mathematics of Raute who also disadvantages group in terms of culture of discrimination, domination and background form mainstream. Mainly the Raute children hesitated to interact with the other children in the school as well as in the community due to the socio-cultural reasons. Such scenario hinders interaction and participation with other caste people that obstruct their learning. Similarly, the Raute children at home learn by observing and engaging in the works of their father, mother and elders. But they do not get the opportunity in the school expecting listening, which is the dominating activity during the day at school.

In order to help children of Raute community, it should not forget that the children are not only culturally different but also incompatible to the mainstream school system. The factors affecting the process of their schooling/ learning should also be considered in order to according them without assimilation to provide other alternative models for their schooling/ learning to organize classroom where they can also participate along with other children.

Ogbu's theory in the Context of Ethnic Group of Raute Community. Raute children are more or less concerned with school problems and the problems of caste like minority. The children with similar culture with the culture of school may do well on school where as the disadvantage in the school because their culture as less congruent and incompatible with the culture of school. Since they are provided difficulties in acquiring skills and contents demanded by the curriculum through teaching/learning activities rather they are culturally deprived in learning.

Ogbu (2001) furthermore argues that discontinuity is also occurred in the area of language, thought and measurement. It happens mainly due to the difference

between the teaching and learning strategies in home/community i.e. informal education and the style used in school i.e. formal education. Similarly, since children learn in school environment without natural context in their experience, learning may have no any significance to their everyday life. Ogbu, (1982) further illustrates that primary cultural discontinuity is generated by primary cultural differences resulting cultural developments before members of a given population come in to context with existing culture of dominating group of population.

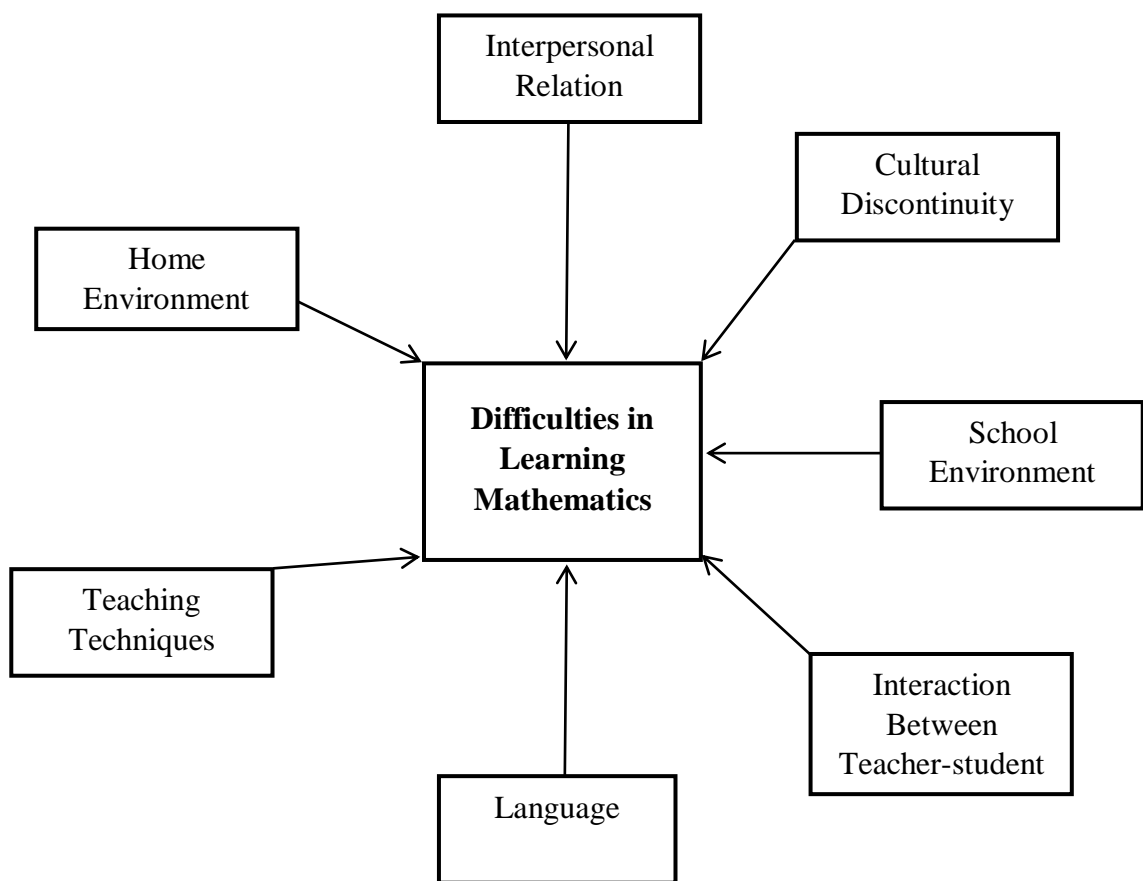
Similarly, a society, on which caste like minorities due caste like have been incorporated in to the society rather involuntary and permanently with lacking in job and status in the society. Due to collective institutional discrimination and display like school system, they tend to exclude from the mainstream with social and economic problems that leads their lives to miserable condition. In addition, such subordinate groups under caste stratification with discrimination do not get opportunities and access to privilege, rewards or positions considered as prerogatives of dominant group because of already fixed socio-cultural system or legal mechanism which are made by the dominant group. In these circumstances, the children from disadvantaged caste tend to develop coping behavior and the attitudes that are different to school that obstruct their learning (Ogbu 1982).

As the present research question is considered, it is helpful in finding the learning difficulties in mathematics and participation of Raute children's. Necessary information was collected from the observation of Raute student's behavior in the class room, on playground, in community; inquiring in the children and the parents about their cultural practices and preferences; carried out in depth study on the children and parents about their cultural aspects that contribute to their schooling. And how do they feel difficulty to mathematics at school was investigated.

Conceptual Framework of the Study

This is a case study, to identify the difficulties of Raute children in learning mathematics at primary level. This case study mainly based upon the culture Discontinuity and cultural differences theory. The following framework was proposed on the effective learning procedure to develop the new knowledge for Raute children's.

Figure: Mathematics Learning Difficulties of Primary Children



(Source: Ogbu, 2001)

The above chart shows that Difficulties in learning mathematics of Raute children at basic level. Research question is considered; it is helpful in finding the learning difficulties of Raute students in mathematics at basic level. This research mainly based upon the cultural discontinuity and cultural difference theory. Hence the

environment reflected the education occupation, socio-economic status, culture and customs and learning opportunities at home.

School environment reflected belief and tradition of the school community delineation the relation among parents, students and teachers. Since the culture of home and school was different in terms of language, culture and customs. So, Raute students have their own language which is not matched at school. To find these different themes this created learning difficulties of Raute children at basic level.

Chapter III

Methods and Procedures

This chapter provides information about overall procedure to be followed to achieve the goal of research. This chapter presents the procedures of the study, which carried out to achieve the objectives of the study and to get the answer of the research questions. It explains design of the study, site selection, selection of the case respondents, tools used to collect the information, method used to collect the information and data analysis procedures.

Design of the Study

Research design is the most important part of the research. Research design is the plan which is developed before starting the research work. Therefore, research design is the base line of each research. Preparation of research design is needed to conduct a research in a proper way. This research based on qualitative research design. This is a case study to find the different of Raute children in learning mathematics at primary level. Case studies are a strategy of inquiry in which the researcher explores in depth a program event activity process or one or more individuals. Cases are bounded by time and activity and researchers collect detailed information using a variety of data collection procedures over a sustained period of time. Qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem.

The process of research involves emerging questions and procedures. Data typically collected in the participant's setting data analysis inductively building from particulars to general themes and the researcher making interpretations of the meaning of the data. The final written report has a flexible structure. Those who engage in this form of inquiry support a way of looking at research that honors an

inductive style, a focus on individual meaning and the importance of rendering the complexity of a situation (Creswell, 2009). This is qualitative as well as descriptive in nature. The data and information were collected through using tools such as observation and interview schedule.

Site Selection

My study was related to learning difficulty in mathematics of Raute school children, the site selection was also a very important task for my studying order to find the appropriate informants related to Raute community in school because the researcher need Raute children who are studying the school. Obtaining easy access, establishing immediate report with informants, and gathering data directly related to my research were the main criteria for selecting settings.

As the tribe Raute spread some district in Nepal, they are also residing different parts of Dadeldhura district. The researcher chooses a Samaijee Lower Secondary school of Dadeldhura district. The researcher had a convincing reason for selecting the school. At present there are 12 teachers including head teacher. The school has the classes from 1 to 8 in which 210 students, among them 43 Raute students.

Sample and Sampling Process

This is qualitative inquiry so that the sample size in this study was not fixed. According to Anderson, there were no rules for sample size in qualitative inquiry (Anderson et al. 2001, p. 123). So the sample size of this study depends on the researcher what he wants to know, what the purpose of inquiry. There were 43 Raute children's enrolled among total 210 students studying in the school. The researcher site was Parashuraam municipality 4 Rajauda, Dadeldhura district. The researcher selected the children's of grade V purposively as the researcher's

convenience. The researcher selected only four students who are low achiever of first term examination of grade V as his respondent to which the researcher found to get right information so as to meet the objectives of the study. As one of the non-probability sampling, the researcher used purposive sampling to select informants that could be done with a specific purpose in mind, and that purpose reflects the particular qualities of people or events chosen and their relevance to the topic. The parents of the case- students, the mathematics teacher and the head teacher of the school were also take as the respondents.

Tools for the Study

Qualitative methods consist of many kinds of procedures to get information during the research. Every study required tools of data. Therefore, in this study researcher was use the following tools: Class Observation Form, In-depth Interview.

Observation Form. Observation is the process of recognizing and nothing people, objects and occurrence rather than asking for information. The researcher used diary the observation form and observation classroom activities, Raute students and teacher's behavior, classroom interaction, student's participation and learning environment

In-depth Interview Schedule. On the basis of objectives of the study the researcher developed the interview schedules in unstructured from for students, mathematics teacher and parents. The main theme of interview, guidelines were learning environment of the school, social, cultural environment and teacher of student's activities in classroom. Instead of writing the response the subject gives were needed information orally face to face. The In-depth interview has the features of both structured and unstructured interview. The researcher prepared interview schedule focus on themes such as:

- Family background
- Personal history
- Reading opportunity at home
- Relation between Raute and other caste children
- View about their culture and language
- View about the learning environment at school and home cultural
- Learning strategies at home and school.

Validity and Reliability of Tools

Validation of data through cross verification from more than two sources was entertained. The researcher was trying to understand by collecting different kinds of information from different respondent and there perspective (teacher, students and parents) from different sources and within different tools. In this study was data triangulation among the sum of information interview, observation obtained from the classroom with the Raute students, math teacher and parents.

Data Collection Procedure

The researcher spent one-month time duration for the collection of data for this study. The data and information were collected through using tools: classroom observation form, interview, and field notes. The objectives of this study was the difficulties of Raute children in learning mathematics and to find thecauses of difficulties in learning mathematics. First I went to the place where the school is situated and talked to the Head teacher about my purpose. Then I observed the school's register and achievement report. There I selected four Raute children from grade five. Then I observed the class, which was conducted by the teacher on this way I continued for 15 days. The researcher discussed certain questions related to their learning mathematics and personal background, educational status of family,

economic status of family, personal interest for learning mathematics etc. The interview was taken from mathematics teachers, head teacher and parents.

Researcher took interview with teachers, head teachers and parents one by one. The interaction with there was listed and noted properly. The researcher had discussed about causes of learning difficulties of Raute students in mathematics and their personal opinion about this. The information about school environment was obtained through interview by the Head teacher and mathematics teacher.

Mathematics classroom was observed by using classroom observation and checklist to note the teaching and activities of the teacher and students in classroom activities. The researcher observed the classroom for 7 days in grade V. The researcher watched, listened, interacted and recorded the essential data from the information about learning strategies, participation of Raute students in class, relationship between teacher and Raute students and other caste students, uses of teaching material in mathematics classroom, classwork and homework etc.

The observation was focused on to collect data about learning environment and Raute student's activities in real situation in the process of observation. Researcher divided a class into the three phases i.e. 0-10 min introduction phase, 20 min main teaching phase, 15 min evaluation and consolidation phase. Within all phases the researcher observed the teacher activities, behavior of language, use of material, biasness, Raute student and teacher interaction, other caste students and Raute student interaction and learning environment of Raute students.

The researcher took in-depth interview with Raute children. After the interview of the key students, the researcher also interviewed the teacher who taught them mathematics. The interaction with the above respondents was carefully listened

and noted properly. The focused student's attendance regularly, participation in extra activities and other behavior noted by reviewing the school files and records.

Data Analysis and Interpretation Procedures

To analyze the qualitative data through a general inductive approach, first of all, I condensed the extensive and varied raw text data into a brief summary format. The next step was to establish clear link between the research objectives and the summary finding derived from the raw data and to ensure that these links are both transparent and justifiable. And finally, I developed a conceptual framework of the underlying structure of experiences or processes that are evident in the raw data.

(Thomas, 2006).

This was qualitative research hence the major part of data analysis was based on descriptive analysis. The collected information from class-observation, interview and school records were first categorized according to the category of the respondents and then different themes were given in the text of interview schedule and observation form. These themes were considered as a code. Similar code versions of the respondents were collected together and explained in their perspectives. The validity and reliability of the result would be maintained by cross matching them.

The above mentioned theme were collected together under the same theme and explained according to the conceptual framework related before the researcher developed and matched with the theory in literature review.

Chapter IV

Analysis and Interpretation of Data

This chapter deals with the analysis and interpretation of the collected information derived from the case study. This was a qualitative study. The main focus of this study was to find the causes of learning difficulties of Raute students in mathematics at basic level. This was a case study related to the difficulties in learning mathematics of Raute children at grade five of Dadeldhura district. The main objectives of this study were to explore the difficulties of Raute children in learning mathematics at primary level and to find the causes of difficulties in learning mathematics. The main tools used for this study were interview schedule, observation form and related published and unpublished school documents. The main respondents of this study were focused children, parents, mathematics teacher and the Head teacher of a school.

This chapter includes the analysis and interpretation of Data. The data obtained for the study were presented in terms of following topics: cultural background of Raute children, language, interpersonal relation, teacher student interaction, environment at home and school. The collected information at first was categorized according to the category of the respondents and different themes were given in the text of interview or the observation note. These themes were considered

as a code and the similar code version of respondents were collected together and explained in their perspectives.

Thus the obtained data and information were analyzed and interpreted in their perspective under the following headings:

- Participation of Raute Students in School.
- Learning Environment of Raute Students at Home
- Learning Environment of Raute Students at school
- Cultural Discontinuity at Home and School
- Teaching Method

Cultural Background of Raute Children

Culture is the most distinctive attribute of human race. Due to of this quality, today human being is able to protect, transfer, and improvise the cultural traits as per its necessity. Culture is not a pre-constituted object but must be created through human intention and action. The human is the main actor beside the creation, and interpretation of the culture; by virtue of human cognition, today's civilization is possible. Culture is a human creation and use of symbol and artifacts. Culture may be taken as constituting the way of life of an entire society, and this was including codes of manners, dress, language, rituals, norms of behaviors system of belief.

Rautes are oldest inhabitants of mid and far western part of Nepal. They are indigenous of the dense forests in the districts of Dailekh, Jajarkot, Surkhet, Salyan, Achham, Jumla, Dadeldhura, Dharchula etc. They speak Khamchi language of the Tibeto-Burman family, and worship nature. Raute language, their culture, religion, writing script etc. are highly influenced by Tibetan culture. Dadeldhura district is one of the historical places where Raute had been living since the ancient time and they had developed their own culture tradition. Their main occupation is farming, physical

labor, fishing, carpenter etc. Like other ethnic group, Raute also have their own culture, religion, tradition, values, and language. Raute people are very simple. Their life standard is quite simple. Their main source of earning is agriculture, physical labor, domestic animal, carpenter. Their language and face are as Mongolian. They have tall, strong and well-built body, some of them are small, they have small eyes and puffed face.

They use 'Kham' language it is related to Bhot- Barmeli language. Raute are expert in making bucket, glass, bowl, Theki etc. from Tuni, Sallo, Simal, VijayaSaal. Rautes don't want to get education. They use Haat, Bitta, Kuret etc. to measure the short length and they use Muthi, Manna, Pathi etc. To measure the volume. They have own measuring concept. They learn everything from their senior's ancestors. They have their own social rites. They don't send their children to school because they are conservative and superstitious.

Majority of Raute people are poor and they feel difficulty in surviving that's why they cannot invest enough for education. Inside the cultural practices directly stimulate the mechanism of society and simultaneously affect the cognitive psychology of the human being. As a result, every activities of human race are shaped and determined by existing cultural pattern of his/her community/society. Therefore, the existence of human beings and cultural attributes is analogous to each other. Specially speaking, one of the major concerns of this study is to analyze how far the existing cultural practice is supportive to learn mathematics for Raute children.

Description of Key Respondents

The respondent children are Raute children. They are Dadeldhura residential. These students are low achiever in mathematics among grade V. The brief description

of the key children which the researcher interview and observation during the study is given below:

Respondent A

Respondent A was a boy of 11 years old studying at grade V. He lived in Rajuda ward no. 4. It took ten minutes to reach school from his house. He had six members in his family. He had very weak economic condition. His father died in a road accident four years ago when he was seven years. his study was not so good because he had to work in his home. Farming, doing labor work and earning money was his duty. He said, "My father died when I was studying in class one. After my father's death I could not give continuity to my study. I had to work in field, earn money by doing labor. I had to look after my domestic animals. So I could not go to school regularly. I am poor in mathematics which I think it is difficult subject for me".

His plan was to study up to grade six. He was not interested in study. He did not do homework given by the teacher. He said, "I have no time to do homework because I have to engage in household work. I have to finish all the household work before going to school". He added, "I know the importance of education but my family environment is not in favor of study that's why I cannot complete my study." There was not separate room for study in his house. The above explanation indicates the main cause of dropout rate of Raute students. Poverty is the main cause which hinders the learning of the Rautechildren.

From the observation and interview of the respondent, the researcher concluded that mathematics is the most difficult subject for the respondent. The reason behind difficulty was the student's unfavorable home environment, poverty and lack of guidance for his study. The respondent did not get enough opportunity to study at home, lack of motivation, unconsciousness about the importance and use of

mathematics in real life etc. are the causes of the difficulty in math learning. So the researcher concluded that the teacher should motivate the respondent toward the use of mathematics in real life. The teacher had to relate class teaching with real life situation giving enough examples concerning the mathematical concepts and practices of the community and should maintain friendly behavior with the student.

Respondent B

Respondent B was a 10 years old boy studying in grade V. He lived in Rajuda ward no. 4. It took five minutes to reach school from his house. He had five members in His family. He had very weak economic condition. To go to school, he had to finish all his household works. he said, "Before going to school I have to finish all the works such as getting saula for animals and other household work. Our member depends upon the farming but we have no sufficient land We have difficult to manage food and other problems. So I have no sufficient time to study in home". He reached school quite late every day. He became usually absent in roll call in his school.

Because of weak economic condition his father couldn't get any formal education but he was skillful in running the house by doing simple works. His father work in carpenter. But his income was very low. So, he could not give enough facilities for his son required for the proper educational environment. Similarly, his mother was uneducated so she could not support her son in his study at home. She was housewife. She helped her husband also. During the observation in the field the researcher came to know, the Raute students had silent home culture, for example the respondent used friendly language in his class like "yokasaribhayobhandeuna sir". The teacher did not like this language, teacher expected respective language like:

"yokasaribhayakobhanidinusna sir" Because of this, the teacher didn't care him. He also could not ask question to the teacher where he did not understand. He used Rautelanguage in his house and community. He had to use Nepali as the second language. He said, "Mathematics is the hardest subject for me. Arithmetic, verbal problem in algebra, and geometry are difficulty for me." The researcher noticed that he had problem in solving verbal problem of algebra He had also difficulty in addition of the fraction $\frac{3}{5} + \frac{4}{7}$ but he easily added the fraction $\frac{3}{5} + \frac{4}{5}$. He also fails to draw the different angles by using compass or protractor. As an observer I asked the respondent the problems faced by them in mathematics. He told me he got more difficulty in learning algebraic expression, multiplied by minus (-) sign, word problem etc. This is because of the mismatch of the mathematical terms, expressions and measurement tools used at school and used by their parents at home.

Respondent C

Respondent C was 12 years old girl studying at grade V. She lived in Rajuda ward no. 4, with her father, mother, brother and sister. There were five members in her family. Her father and mother was uneducated. They used Raute language. Her father was a social worker and familiar with Raute culture, tradition and values. He was member of school management committee. She was a regular student in class and she always participates in extra activities also. She could not use respective formal language in school, so the teachers did not care her learning. She said, "All the teachers in our school speak Nepali language. They are not from our community. I felt hesitation to ask question directly to the teachers. Instead of asking to the teacher I felt easy to ask my friends in our own language. If there are teachers from Raute community our school, it would be better for me to ask question in my language. Mathematics is difficult subject for me."

She had difficulty in verbal problems of mathematics. She could not ask the question to the teachers which she did not understand. But if she felt difficulty in class she preferred to ask her friends in Raute language. This activity was not acceptable to the teacher. So student teacher interaction was not amicable. She had enough time to study at home but the language difference and cultural discontinuity were found main cause of learning difficulty. She did homework given by the teacher but many mistakes were found in her work. The standard measurement unit used in books had no practical use in her house, mana, pathe, dharne, mutha were frequently used in her society. Twenty based counting system and Raute counting like Da, Ni, Hun, Padi, Pana, Turke etc. which she had learnt at home had no application in school curriculum. Thus cultural difference and discontinuity causes the, learning difficulty in mathematics. The researcher concluded that the mathematics teacher should maintain the friendly environment in mathematics class, teaching should have made fruitful by use of sufficient instructional materials, teaching should relate with real life situation, prefer to use the examples of mathematical concept practiced among Raute community.

Respondent D

Respondent C was a 12 years old boy studying at grade V. He lived in Rajuda. He was very much curious and intelligent. He did not forget to do his homework as he was good student. He attended all the classes. He always participated in extra activities also. He told with his classmates that he did not show much interest in games. He did not like to do the work as others did in the community. His father was a political activist of the village level. His father generally became busy in the work of his political party so he was not able to give enough time to his children at home. He agreed that his son was talent children in study but he was weak in mathematics.

According to him, the reason was the cultural difference, language discontinuity, and inadequate parental help his mother uneducated housewife and could not help him to learn. He wanted to participate in all extra activities organized in the school, but his poor language code always humiliated him and he felt dominated in school, due to his language problem. He had not the problem of school needed materials like books, copies, pen etc. He took tuition classes regularly as he was weak in mathematics, the tuition classes helped him in learning comparison to other Raute children. He had good opportunities in learning. So he was more talent than other Rautestudents. He said "Addition, subtraction, and multiplication of algebraic expression are difficult for me.

some examples are

Addition of Following

$$\begin{aligned}
 &4x+6y+8z+3x+4y-2z \\
 &= (4x+3x) + (6y+4y) + (8z-2z) \\
 &= 7x+10y+6z
 \end{aligned}$$

He got wrong answer instead of getting right answer $7x+10y+6z$

The sum of b & 5 in the following way

$$\begin{aligned}
 &= (b)+(5) \\
 &= 5b
 \end{aligned}$$

He got it wrong once again instead of getting right answer $b+5$

These examples indicate the mistake occurred in addition and subtraction.

From the above description, it is concluded that the students have less knowledge about the algebraic terms, symbols and variables and constants.

Cultural Discontinuity at Home and School

Raute children were not given emphasis for their learning in school practices. They always considered school as an artificial and incompatible institution so they neither assimilated nor accommodated into mainstream of school system. In home they learned by observing and doing things side by side. But they did not get chance of that in school. There were great differences between the lives of Raute children at home and school practices. As the Raute children had to engage in household works, they did not have sufficient time to study at home. Teachers did not ask these types of children about their home environment. Raute children felt difficulty in learning theoretical knowledge as they practiced practical works in their home like farming in field, working as a labor to earn money etc. They use their own counting system: Da, Ni, Hun, Padi, Pana, Turke etc. They use Haat, Bitta, Kuret etc. to measure the short length and they use Muthi, Manna, Pathi etc. to measure the weight. This discontinuity between everyday life and school practice made Raute children to feel complicated in learning mathematics.

Since the culture of home and school was different in terms of language, teaching style, and the everyday lives of Raute children at home and school was also different. In this situation they had to adopt the learning strategy differently. Consequently, they faced problem in learning mathematics. Since the learning strategy of the children at home was discontinued at school. Here according to the theory of cultural discontinuity, Ogbu (2000, 2001) argued that due to the cultural discontinuity between home and school, children face problems in learning mathematics. Environment of home and school affected the learning of children. To sum up, the discontinuity between the culture i.e. environment of home and school discouraged the mathematics learning of Raute children.

Teacher never gave proper attention separately to the Raute children. Raute children learn at home and school along with different influencing factors. Home is treated as the first school of human being. So, home environment, school environment and parent's behaviors etc. play an important role. Similarly, the social behavior and teachers also play the vital role for Raute children in learning mathematics.

The researcher found the learning strategy of Raute children like observing activities and involvement in the real life activities are discontinued at the school that affects their learning. Most of the children had difficulty in learning mathematics in same area and difficulty was due to their cultural discontinuity. Their weak economic condition which forced them to do different works. On the other hand, the children were forced to engage in performing household works by their parents. When they went to school they had to face different bad behaviors from their friends from other caste. Teachers also did not give special attention to them as they treat all the students equally.

Learning Environment at Home and School

Environment is the totality of the educational atmosphere at home and school. Home is regarded as the first school to all individuals. They learn how to behave, how to respect elders, how to cooperate to each other. Home environment plays a vital role in learning. Home environment reflects the occupation, economic condition and learning opportunities of the students at home. School is the second home of any child. The teachers, students and parents are the components of the school. School environment reflects belief and tradition of the school community delineating the relation among parents, students and teachers. Scholarships to the students, extra class

provided to them dominance of language, cultural dominance are the major aspects of school environment.

The Raute use informal language in his/her family, which has not standard vocabulary but in school informal language is not suitable. The standard vocabularies are used. In every household there is micro culture which was discontinued in the school culture. There is gap between silence culture and forwarded culture. Home environment is affected by everyday life of all individuals.

"We don't have basic things in our house, how long can we go on this way. Nobody is in the family to earn money. We are in difficult situation to survive. We have difficulty in hand to mouth existence. How can we send the children to the school"? (Parents view)

The above view, it indicates that the economic status of family influenced to the achievement of the students. The high economic status could get better chances to buy books, copies and to take tuition and Coaching classes.

"Our parents forced us in farming and household works. They said farming and labor is our main occupation. Parents said to us that we should engage in household works like farming, labor etc. and to earn money rather than school."

(Students view)

The above views indicate that children of Rautehad no sufficient time at home for mathematics learning. They had to engage on their main occupation, i.e., farming, labor. The learning opportunities at home for Raute students were not sufficient. Mathematics needed more practice to achieve good marks. Raute students had not such facilities.

"My parents are illiterate. My father rarely comes at home. He always drinks. He works as a physical labor in Dadeldhura. Mother spends all time

making domestic use materials. Nobody is literate than me at home. So I have to handle all domestic problems there is no separate room to read peacefully at home. So, I can't take effort about my education."(Students view)

The above view showed that Raute were illiterate. They could not teach their children at home. Due to lack of education, Raute were engaged on different works. The involvement of their parents in their children's learning was negligible. But the role of parents in involvement and encouragement helped the child to excel. Parents are first and ongoing educators of their own children as such should receive information and support to help their children's learning at home and in the community.

Concerning on the learning opportunities for the children at home, all of the children's home environment were not conducive for mathematics in mathematics learning. Although they were poor in mathematics, they were not provided with extra classes activities and although they were economically poor, they were not again provided with scholarship at school. This was very intolerable condition for Raute students were facing at school. Their learning was also hampered by the language dominance. The difference between their home language and school language also hinders in their proper learning mathematics. So they were poor in mathematics. Therefore, the home environment of Raute students was not in favor of the mathematics learning and school environment was not conducive for the mathematics learning. The low socio- economic status, unmatched culture at home and school, negligible parent's involvement and not sufficient learning opportunity at home were the main factors that obstruct/ hinder in creating proper learning environment at home and school.

Language

Language is the greatest means of human civilization that sets them apart from the other living beings. It is such a means by which we perform communication, thinking, group solidarity, nation buildings, control and creation and absence of which no artistic academic and social activities can be thought. The language is major component for learning. It was observed that Raute children tried to speak Nepali language with teacher and with other students. But there was misunderstanding between language communications.

"Raute have their own mother language. They do not speak Nepali language at home but in school Nepali is used. The language at home and school does not match. So they felt difficulty to learn mathematics."(Head Teacher)

"Our parents at home, frequently speak Raute language but they do not use Nepali. So we must speak Raute language at home. We have no opportunity to learn Nepali language at home but in school teacher always teaches in Nepali language. If the teacher taught us in Raute language, it would be easier for us to understand the things." (Students View)

Supporting to the parents and student view the mathematics teachers was the major factors for creating the learning difficulties for Raute students.

"Raute children have language problem. They cannot speak Nepali correctly. They speak mixed language which is difficult for us to understand. I always feel their irrespective language in the classroom. The Raute children feel difficulty in understanding Nepali language in comparison to other students."(Mathematics Teacher)

From the above view it showed that the Raute students had poor Nepali language. They spoke their own mother tongue at home. The language of Raute was not matched with the school language. In home they use Raute language but in school

they were forced to speak in Nepali, it was difficult to them to speak second language that's why they lagged behind in learning mathematics.

One episode of mathematics is given here. It was observed when researcher went in class with mathematics teacher. "The teacher went to the class, then after the researcher also entered in the class. The entire student stood up and said good morning sir. The teachers said good morning and sit down. It was noticed that the school environment has taught them about the respect for the teacher. There were 30students in the class among them, 5 were Rautestudents. Teacher took the attendance of the students. All five students were present in the class. Teacher opened the book and wrote the topic simplification. He wrote a problem on the blackboard and solved it. All the students were busy to write the solution from the blackboard. The teacher did not review the previous lesson and did not check the homework. After some time, he asked with the students whether they got thepoint or not. Some said "Yes Sir." But one of the researcher's respondents askedwith teacher showing his copy "*Phelybhanidinumaille to bujhena.*" The teacher did not take care of him. Then the student started to ask the question to his friend in his language. They discussed for a while but the teacher did not take care."

From the above views and classroom activities, it was concluded that there was discontinuity in language. Ogbu, (2000) furthermore argued that the discontinuity occurs in the area of language. This discontinuity carries the difficulty in mathematics learning. Finally, it can be concluded that language is one of the factors that arises the difficulty in learning mathematics for the Rautestudents.

Teacher - Student Interaction

Interaction is the social activity and may be within persons and between persons. Within person's interaction refers to the mental activities with his/ her mind

and soul. It depends upon the personal intellectual capacity. Inter-individual interaction refers to the sharing co-operation and adjustment between two or more persons. According to Ogbu (2000, 2001) learning takes place through environment, culture between home and school. The interaction between people may be symbolic single or code language. Interaction brings the maturity in learning.

"All of the school teachers at the school are from Brahmin & Chhetri. They do not response us. If mathematics teacher would from Raute community, we could easily interact with him".(Student)

"Raute students are poor in language pattern. They always speak in Raute language. They always used to sit together in group. They have poor interaction with other students also. I cannot understand their language. They use mixed language in classroom. Sometimes I ask questions but they cannot response. So I do not like to ask questions to them."(Mathematics Teacher)

The above views of student and teacher indicate that there was language discontinuity in the mathematics classroom. Due to the mixed language used by students in the classroom, teacher did not understand the mathematics problem raised by students efficiently. There were difficulties to interact with mathematics teacher and other students of mathematics classroom for Raute students which were due to language. The above views also indicate that the mathematics teacher had been neglecting the questions raised by Raute students in mathematics classroom. Hence there was not proper interaction between Raute students and other students as well as teacher in the actual classroom practices. One observed class episode is given below.

"The teacher was just entered in the class with daily using teaching materials. Researcher also entered in class with mathematics teacher. He had started to teach. He wrote the topic construction of angle. He did not review the previous lesson. On

that day one of the researcher's respondents raised one question but the children did not ask the question to the teacher directly rather he asked to his friend sitting near to him. Both the children discussed the problem in their language (Raute language). The teachers' attention bends toward the students who were talking. The teacher was angry and asked the students not to disturb. The students said that they were discussing about the subject matter which they did not understand. Then the teacher ordered them to speak in Nepali language and to ask the question directly to him."

From above classroom activities, it indicated that there was no proper interaction between teacher and students in mathematics classroom. Teacher did not response the Raute students and the children are always dominated in the classroom. Raute students interact with their friends and teachers only in informal language which was limited therefore in learning mathematics ideas sharing, co-operation and adjustment became difficult that create since the culture of home and school was difficult in terms of language code and teaching strategies and selection of knowledge. According to Boulet (2007) the teacher's role mathematical discourse in the classroom is central which being responsible for creating the opportunities for students to engage in discussions.

Interpersonal Relation

When the researcher observed the activities of the Raute students at school, in classroom, in playground I found that the Raute children often remain silent, hesitated to take part in every activity. The children generally afraid of asking question to the teachers. They felt problem to ask question in the class due to his language that the teacher do not understand and become angry. It seemed that the lack of interpersonal relation and communicative skill with other caste people was not properly developed to Raute children. They couldn't interact well with his friends. The main influencing

factor for the lack of interpersonal skill was the nature of relationship between the disadvantage culture.

As the researcher has observed the four key respondents, the researcher found that there was not good communication between Raute and other children. Although they ate together, played together, but their community was different. The key children felt shame to ask anything with teachers and they didn't speak more with other children. Their interpersonal relation with other children was not developed nicely. Other caste children raised more questions but Raute children lacked the interpersonal relation with other. Due to the behavior of other children towards them, they felt quite serious. The friendly language used by the Raute children forced the teachers to feel irrespective behavior of them.

Due to the language felt problem, either the children hesitated to take part in interaction or they felt to their own mother tongue and culture but it was not their serious fault by intention not to respect the teacher. They learned restricted language in their family/community transmitting by the society. The researcher found that their language created cultural misunderstanding with teacher. The friendly language which they used in their home and with their friends and elder people is used in class. It shows that the culture of home was also influencing factor for the learning mathematics of Raute children. So interpersonal relations also influenced to learn mathematics and they feel difficulty in learning mathematics.

Impact of Home Environment in Learning Mathematics

Most of the Raute parental generations were uneducated. They were only skilled to traditional pattern such as, they make different types of home appliance like box, bed, theki etc. from Tuni, sallo, simal, vijayasaal. and other household activities. The dropout rate of Raute children was excessively high in school. The boys of new

generation were especially encouraged to continue the education. The impact of media was supportive to misconstruction of the thought pattern of Raute. The girls of Raute community were facing dual burden of study and household activities. The uneducated and illiterate parental generation could not feel the value of education, as it should be which eventually resulted in high rate of failure and dropout. Very few Raute children enrolled in college and school. Beside this major factor, lingual problem is the reason of massive dropout rate of Raute children from school and college. They had to use the second and third language in school and they used informal/friendly/poor language in their community/ home, which was different from their home language. Young Raute children were obliged to learn three types of languages: - first they used their mother language (Raute language) at home is informal or friendly language, second Nepali language and the third local language in community.

Raute students learnt by looking or by practicing. In home the students learnt counting of things in their own numeration system.

Number of counting and their Translation

Raute	English	Nepali
Da	One	Ek
Ni	Two	Dui
Hun	Three	Tin
Padi	Four	Char
Pana	Five	Panch
Turke	Six	Chha

Satte	Seven	Sat
Aaththe	Eight	Atha
Nabe	Nine	Nau
Dawe	Ten	Das
Aghare	Eleven	Eghar
Sate	Sixty	Sathi
Dahe	Hundred	Saya
Da Hajare	Thousand	Hajar
Da Kkhehajare	Ten Thousand	Das Hajar
Da Lakhe	One Hundred Thousand	Ek Lakh
Da Karod	Ten Million	Ekkaror

This counting system was generally used to count their money (selling, buying, earning etc.). But there was no written script for the numbers. To weight the things, they used the Muthi, Manna, Pathi.

But in school, mathematics was learned by logic using formula etc. there was a big discontinuity between home environment and school environment of Raute children. He learnt about different units for measuring and weighing goods in school, which were not applicable in their community/ home so that learning about school math had no immediate importance for Raute students/ children. Lack of concept of modern measurement scale: in gaining, weighing goods, they didn't have concept of modern kilogram system. They measure the weight of certain things in iron utensils like mann, pathi, moori, dharni, bisauli. The frequent use of Raute numeration system

to count things, their own method of addition, subtraction especially of their earnings, expenditures etc. in their home/ community largely interfere the school learning. They had to rely on traditional units which was used everywhere in their society. So he felt difficulty in learning mathematics. Simple problem like addition, subtraction, multiplication was not difficult to learn. Since the learning strategies of children in home was discontinued at school. Here according to the theory of cultural discontinuity, Ogbu argued that due to the cultural discontinuity between home and school children felt difficulty in learning.

Chapter V

Summary, Findings, Conclusion and Recommendation

This chapter is basically concentrated in deriving some findings from the discussion of chapter IV. Besides findings and conclusions, it has some educational implications, which are also discussed on the basis of overall study of Raute school children. After analyzing and interpreting the data, the researcher has tried to summarize, draw findings, derive conclusion and recommendations for further study.

Summary and Findings of the Study

This was a case study related to the difficulties of Raute children in learning mathematics. Raute people are being discriminated, humiliated and disadvantaged socially, economically, culturally and politically in the society by the other caste people and the state policy.

Mathematics is a language which is basic tool of communication. Daily communication involves the frequent use of mathematical concept and skills. So mathematics is essential for understanding and interpreting of every discipline. Now

every human discipline such as chemistry, physics, social science, economics, psychology, etc. are interpreted as a mathematical model. Without having mathematical knowledge, it is very difficult to understand those disciplines. Mathematical techniques are essential tools for the development of every field of knowledge.

So the researcher intended to study the difficulties of Raute children in learning mathematics atopic. The main objectives of the study were:

- To explore the difficulties of Raute children in learning mathematics at Primary level.
- To find the causes of difficulties in learning mathematics at primary level.

The research was conducted in Samijee Lower Secondary SchoolRajuda 4. Dadeldhura district.

The design of this research was explanatory case study in which meanings were derived from the total study; logic and reasoning of why and how it was like that, linking with theories. The case study of those sampled Raute children were carried out through uncontrolled observation and interview where needed. For the case study, three boys and one girl were selected; who were studying in class five was taken as the sample. To support the findings of the study, John Ogbu's theory of cultural discontinuity was used. Most of the children have difficulty in learning mathematics in same area and difficulty is due to their cultural discontinuity and also frequently absence. In one hand they are forced to engage in household works by the demand of society. It is their weak economic also, which force them to be engaged in different works.

On the other hand, they are forced to do work at home by their parents. Teacher never gives proper attention separately to the Raute students, influencing

factors which have indelicate dare very important because Raute children learn at home and school along with these influencing factors. Home is the main area of learning for children. So, home environment, school environment, parent's behavior etc. play an important role. Similarly, behavior of society and teacher also play the vital role for Raute children in learning mathematics. As an observer, the researcher found that there are many factors affecting of Raute children at school. These factors are language, interpersonal relation, teacher student interaction, environment at home and school. The researcher found that following are the causes of difficulties in learning mathematics:

- All Raute students have facilitated with compulsory books but most of the students do not access in mathematics practice book and tuition.
- Raute students have used their mother language at home and Nepali language in school. There is language discontinuity at home and school in basic level.
- They felt difficulties to understand the mathematical term, symbols and expression before going through them.
- The financial condition of the parents is not strong enough to send their children at school. Besides they involve in earning for the livelihood. Therefore, they become absent in the classroom which hinder their good achievement at Mathematics.
- Mathematics is a such subject which topics are interrelated to each other. They need regular and attentive study. However, Raute students are found to be irregular.
- They attend the class without their homework. They are for weak to exercise mathematics at home and school.
- There were not extra mathematics classes which give the students feedback.

- There is lack of multilingual teacher who can make them understand mathematics easily.
- There is group lack of group task activities, participative task, interactive and motivate activities to teach mathematics in the classroom.
- Both the students and parents lack the positive thought towards mathematics in particular and towards the education in general.
- Due to the lack of exercises and attentive study. Raute students take negative thought towards mathematics. They get it as the most difficulties subject.
- They hesitate to hold discussion with their teacher about any mathematics problem. They simply remain neutral in the class.
- There is lack of interpersonal relation between Raute students, mathematics teacher and other students at class.
- The home and school environment is not suitable for the mathematics learning of Raute children. They always receive dominating behavior by other students and teacher at school.
- There is no proper interaction between Raute parents and subject teacher and school management about their children progress in mathematics.
- In home environment parent's education, poverty, gender bias, lacks of study hour, behavior of the parents were the sources of learning difficulties.

Conclusions

To improve problems related to language, culture enroll a teacher who knows about Raute language. To upgrade economic condition, government should employ their parents. To create learning environment at home awareness their parents by organizing some programs and to provide the extra classes in school specially focused Raute students.

The language, culture, economic status played main role of Raute students, also the experience and everyday lives are seemed to be ignored by school practices. The learning environment, instructional materials are the main key which affected the study of Raute student. Since Raute students are suppressed, it is very difficult for them to maintain social decorum in the society, similarly they cannot go equally with others because of their socio-culture norms and values.

Recommendations

Teacher can relate the everyday learning with teaching learning activities by reflecting their previous experiences in the home/community where he or she has performed different everyday activities for instance, telling how she/ he did shopping in local bazaar/place, where measurement tools were used. This may be an effort in local level, which can be done in school level. The teachers have to create situation that can be bridging between home and school practices. According to the finding and conclusion provided by the study, the recommendations for further study can be presented as:

- A similar study can be done for other subjects of both Lower and secondary levels.
- School can apply practical knowledge based activities which can promote their previous experiences.
- This study is done with limitation and in particular area. The broad and general study can be done for overall Raute community.
- Teachers should be played a vital role to bring good interpersonal relation among them and the Raute children. A study can be done on the causes of school dropout problem of Raute students.
- An extinctive study can be done on the effect of parental involvement in learning mathematics.
- A study can be done on the causes of school dropout problem of Raute students.

References

- Aale, S. (2012). *Mathematics Learning Difficulties of Magar Children at Primary Level* (A case study in Sindhuli district). An unpublished masterthesis, T.U., Kirtipur.
- Adhikari, K.P. (2007). *Learning Cultural in Mathematics Classroom in an Effective School*(A case study). An unpublished master thesis, FOE, T.U., Kirtipur.
- Adhikari, S. (2006). *Cultural Discontinuity and Difficulties in Learning Mathematics of Dalit Students*. An unpublished master thesis, T.U., Kirtipur.
- Boulet, G. (2007). *How does language impact the learning of mathematics*, journal of teaching and learning, vol.5, no.1
- CERID (1990). *The Elementary Process of Learning Mathematics Concepts and Process of Rasuwa, Tamang*, Kathmandu: Tribhuvan University, Kirtipur.
- Creswell. J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*, (3rd ed.). New Delhi: Sage Publication India Private Limited.
- Dahal, B.P. (2011). *Causes of Low Achievement of Magar Student*. An unpublished master thesis, FOE, T.U., Kirtipur.
- Dhami, D.R (2012). *Impact of socio economic status on mathematics achievement of tharu students*. An unpublished master thesis, FOE, T.U., Kirtipur.
- Gautam, R. and Thapa, A. (1994). *Tribal Ethnography of Nepal*, India: Kelhi Book Faith.
- Ghimire (2005). *Difficulty in learning Algebra a case study of Blind students*. An unpublished Master thesis, T.U., Kirtipur.
- Ghimire, S (2012). *Difficulties of Bote students in Learning Mathematics*. An unpublished masterthesis, T.U., Kirtipur.
- Khanal, P. (2010). *Educational Research Methodology*, (4th ed). Kathmandu: Sunlite Publication.
- Lornez, J. H. (1974). *Teacher-student interaction in the mathematics classroom*.
- Nepal (Yatri), P. Y. (1997). *Raute Lok Jivan*. Kathmandu: Ratna Pustak Bhandar, Nepal

- Ogbu, J. (2000). *Understanding cultural diversity and learning*. In Bradley A.U. Levinson, et.al (Eds.); *Schooling the symbolic animal*, (pp. 190-206). Oxford: Rawman& Littlefield publishers, Inc.
- Ogbu, J. (2001). *Understanding cultural diversity and learning*. In Bhallantine, J. and Sapde J.Z.(Eds.). *School and Society*, (pp. 334-354). California: Wadsworth/ Thomson Learning.
- Thapa, N.B. (2011). *Participation and achievements of Dalit students in lower secondary level*. An unpublished master thesis, FOE, T.U., Kirtipur.
- Thomas, David. R. (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American Journal of Evaluation*. DOI: 10.1177/1098214005283748
- Shahi(Sampa), K.B. (2000), *RauteJatiekChhotoChinari*. Kathmandu: GraminUtthanSamaj: NepalPublication.
- Upadhyay, H.P. and Dhakal, B.P. (2064). *Trends in Mathematics Education*, Kathmandu: Balbalika Education Publication Pvt. Ltd.
- Wasonga, T. A. (2005). Multicultural Education Knowledgebase, attitudes and preparedness for diversity. *International Journal of Educational Management*, Vol. 19 Issue: 1, pp.67-74, <https://doi.org/10.1108/09513540510574966>

Appendices

Appendix-A

Individual student Record- 2018

School's Name:

Name:grade:

Roll no.....girl/boy.....

Age.....

Nationality..... Religion.....

Address.....

Distance to school from home.

Approximate

On foot.....Bus..... Other means.....

Father's Name.....

Occupation.....

Mother's name.....

Occupation.....

Number of family members.....

Appendix-B

Interview format with the key informants 2018

Student's Name.....grade:

Roll no.....age.....girl/boys.....

The interview with the Raute students was taken in the basis of following in main topics.

- Family background
- Personal history
- Working time in his/her home
- Reading opportunity in home
- Learning strategies at home
- Learning strategies at school
- View about mathematics
- Difficulties area in mathematics
- Relation between Raute students and other students
- Relation between Raute students and their mathematics teacher
- Appropriateness of teaching learning strategies
- View about school environment

19																		
20																		

The observation is done in the base of following main topics.

- Friend's behavior towards the children.
- Main area of interest of learning.
- Children's involvement in household work.
- Daily life practices.
- Teacher's behavior toward the children.
- Main interest thing in learning mathematics.
- Difficult area in learning mathematics.

Note: - daily field notes were prepared for every respondent including child's participation (individual/group), teacher's activity, homework, class work and observer's comment and daily attendance on the basis of above observation table.

Appendix-D

Interview Format with math Teacher

Date of interview: -.....

Name & Caste: -.....sex:age: -.....

Religion: -.....qualification: -.....

Experience in teaching: -.....other: - trained/untrained

Address: -.....ward no: -.....

V.D.C./municipality: -

The interview with mathematics teacher was taken on the base of following topics.

- Teaching strategies of the Raute students
- Problem of teaching Raute students
- Encouragement of the student learning
- Participation on individual/group
- Relation between teacher and Raute students
- Impact of cultural difference in the learning mathematics
- Factors that influence the learning of mathematics for Raute children

Appendix-E

Interview Format with the Head Teacher

Date for interview: -

Name: - Address: -

Religion: -.....Qualification: -.....

The interview with the head teacher was done in the basis of following topic

- Learning environment in the school
- Student and teacher relation
- Student opportunity for learning with teacher
- Guidance for mathematics teacher
- Difficulty thing for Raute student at school
- Causes for difficulties

Appendix-F

Interview format with the parents

Name:

Address:

Occupation:

Monthly:

Qualification:

No. of children:

Interview Guideline with parents

- View about school and teacher
- View about mathematics
- Afford of his children study
- Expectation from school like scholarship and other facilities
- Awareness towards their child learning
- Opportunity provided for learning to them at hom
- Support their learning