Chapter-I

INTRODUCTION

Background of the Study

Human civilization depends on education. Education, in its broad sense, aims to transfer of the ideas, attitudes, experiences and knowledge of people in the community. Education plays a significant role for the overall development of citizens and country. Within the education and educational system, so many disciplines have vital role. Historically mathematics has been accepted as major disciplines in the educational system.

Education has always been the most effective medium through which virtues like honesty, kindness, love, co-operation and sacrifices are installed into human mind. Therefore, education must be provided for each and every citizen of country for the betterment of the individual as well as the development of a nation is impossible without the equal participation of all the individuals from all castes of the community whether they are men or women, poor or rich. Education is the system of several subject systems working jointly for teaching about civilization of people usually through formal or informal approaches. Educational institutions have rights of produces a trained and qualified manpower for all sectors of the development of the nation.

In the beginning, man studied mathematical structure as found in his culture. Either pure mathematics or applied mathematics, roots of these are based on culture. Encounters with other people and other cultures all over the planet after the great navigations of the sixteenth century led us to identify mathematical practices and mathematical ideas mainly those relating to measurement, counting, classification and modeling in every culture (Ambrosio, 1997, P. 245). In many instances, for example, in ancient India and the Mediterranean civilizations, mutual influences are noticeable and have been well known since antiquity. In other instance, no mutual influenced are discernible, but there is a remarkable coincidence of practices, result and even ideas. In all these instances, equally remarkable differences are noticeable, which lead us to consider many different "mathematics" we are increasingly recognizing " different forms of doing mathematics "or" different practices of a mathematical nature".

The economic need and production is being global in the modern world communication systems are inter connected, and major political decisions are not taken unilaterally. The people don't get those opportunities yet to up lift their life better in modern way. They follow the conservative costumes, religions and spend their life in a old tradition. But schools expect students to learn the same Mathematics developed by excellent Mathematicians. Otherwise students can hardly operate in the modern world. Mathematics is behavioral science, also influenced by cultural rule. This view has been supported by many current historians and philosophers of mathematics (Ambrosio, 1997, P.246). Hence different languages, dresses, foods and religions have made existences of different cultures. Culture influences the activities of people.

Consequently mathematical ideas (measurement, counting, classification, modeling etc) may have in different way in every culture which leads that different way in every culture which leads that different nature of mathematical ideas and practices are found in cultural base. Today cultural based mathematics is known as the term "Ethno-mathematics or, ethnic groups mathematics".

Introduction of Tharu

In Nepal, there are more than 103 Ethnic / Caste groups with distinct language and culture .Tharu are one of such communities possessing indigenous identities. Tharu are the oldest inhabitant group in the Terai. Usually they live very close to the heavily forested regions. Most of the large compact Tharu settlements are to found in tropical martial areas. It is said that most of these lands (Terai) were original cultivated by the Tharus and in course of time cleverer people come & got the better of them. It is also said that there are few Tharu king in Terai. They are ruined their kingdom like sakauragarh in Dang valley that said to have been built by the Tharu king Dangai-Bhusai (Bista 2004).

Tharu are mostly found in the Terai intending from Koshi in the east to Mahakali in the west & also dominated by different races; such as in the east, their language is mostly dominated by Maithali language and in the west it is dominated by Hindi & Abadhi language. So they speak a language mirced of prakrit, Bhojpuri & Magadhi. The Tharu people have dark complexion, muscular slim body and an average height of 5.2" (Ibid).

Tharu are Laborious and very hard working people. They live at the edges of forests. Tharus by nature seem sincere and single minded people. They are educationally disadvantaged community. Only small percentage of children completes school education. Girls are little interest in going to school, because of most parents can't afford the expenditure of education. Some Tharus are economically quite well. They are educationally and culturally well exposed. Due to the difficultly with Nepali language, especially in the early grades of the primary school, makes learning an uneasy task.

Tharus populate the entire length of the Terai region of the Nepal. According to census 2011, The total population of the Tharus in Nepal is 17,37470. Which is 6.55 percent of the total population. According to sensus 2011, 1529875 (5.77%) of Nepal's population speak Tharu language. Tharu are the largest ethnic group of the Terai. Tharu is one of the most exploited, under privileged and backward ethnic group of Nepal (CBOS-2012)

Ex-kamaiyas (Freed Bonded Labors)

The slavery system in Nepal was officially abolished by late Prime Minister Chandra Samsher in 1926 B.S, but it was common in far western Terai region some years ago. The Kamaiyas were bonded labors in terai. Many INGOS and even the government did the declaration of liberation of Kamaya in 21th Shrawan, 2057 B.S.

There is some evidence to suggest that the Kamaiya system developed initially from a survival strategy used by the Tharu to help insure against the risks of sedentary farming. But as the time passed the new landlord covered the system in to a highly explosive one where large landholders kept Kamaiya to work their land in some extent that they kept oxen or other form livestock.

Most of the Tharu of Terai (especially Dang, Banke, Bardia, Kailali & Kanchanpur) used to be greatly exploited by the ruthless Zamindar (land lord). The poor Kamaiyas had to depend on the mercy of Zamindar. Generally, they were buried deeper and deeper in dept every year. Many Kamaiyas used to prefer to have goats and fowels but some so called Kishan (Landlord) did not allow them to keep the livestock. There for agriculture laboring was the main occupation of the Kamaiya. Some of the Kamaiya did not get any cash from their masters (Kishan), Kamaiya had not time to buy clothes send their children to school or to bye Medicine. Many

Kamaiyas used to die without getting medicine, which was available nearby Tikapur and local markets.

Kamaiyas were free to select and change their Kishan but one has had to work at least one year. This type of contract used to be done in the month of magh (January, February). Both husband and wife used to work at the house of Kishan. The Kamaiya used to get 5-15 quintals of rice and 1-3 quintals of wheat for his annual labour.

Kamaiyas were those people who used to work for land lords on the basis of oral contracts which used to renew annually in consideration of a wage to be paid in cash or kind. This was either a fixed quantity of paddy or a fixed portion to preclude of a land cultivated by Kamaiya himself. Out of total Kamaiys 93.2 % were homeless and 98.2 % were landless, When they were treed (INSEC- 1991). Most as the women and children of Kamaiyas are socially and economically exploited. Their masters sometimes subject women of the Kamaiya to sexual abuse as well (INSEC- 1991).

After the rehabilitation of Kamaiya , they got distribute lands of area 5 Kattha (1693 . 16 m^2 one quarter of one Bigaha) . Even in this 21^{st} century, almost Tharus are uneducated and are trapped on the chains of darkness. Among the Tharu community, the Ex-Kamaiyas group is the most socially, economically, politically deprived group. They are still incapable to send their children to schools. This fact is the main come to bring and to include them in the mainstream of national development. Their children many have the potentates for the national development but is wasted.

Education is the key factor of determining the overall progress of each society. Therefore, education must be provided to each and every citizen of any country for the betterment of the individuals. While education constitutes the fundamental basis for the advancement of any society all is not well with this sector in Nepal and more. So in the case of primary education despite many years of effort to strengthen.

Ex- Kamaiyas are the minorities marginalized disadvantaged and deprived groups in western Nepal. They are economically politically and socially exploited and are injustice so that they are not included in the national possession. They have cultural economic and political issues. They have religious & linguistic discrimination low literacy and unemployment problem and have low representativeness in the national and local government.

At present there is legally no such discrimination between peoples. Students belonging to different ethnic group are studying in schools under the same roof. Many variables are known to play roles enlacing or lowering the achievement of the pupils. In this context awarding attainment directly relates to accessibility of educational facilities. This however, should be interpreted in terms of physical access as well as Social access. Social access pertains to the ability of different communities to find meaning in the educational provision as well as to the confidence in using the educational opportunities and facilities. Also the study indicated that some people in some communities like Rana Tharus tended to see education as irrelevant to their socioeconomic conditions and therefore productive (CERID-1998;PP.20-32)

It is shown by various reserves that the positive environments play a vital role for the enhancement of mathematics achievements. The positive attitudes and negative attitudes both influence in mathematics learning. But it is difficult how to measure the factor that influence students attitudes towards mathematics.

The researcher was interested to find out the major problems that why they feel difficult and uninterested to use mathematics in their daily life situation. Further more the researcher was interested to find their drawback and to improve those problems he would selected the one school of Ex-Kamaiyas at Durgauli VDC in Kailali.

Statement of the Problem

Children are the future builders of the nation. So the behaviors, knowledge, skill acquired through learning are essential for productive citizen. Equal opportunity of education for all is the most essential programmed. In general, it can be seen that mathematics is essential for one's daily works, official household work and field works.

More or less mathematical knowledge is required for every one's daily life activities. In fact, in every working field people are using mathematics knowingly or unknowingly. Ex-Kamaiya Tharu students need mathematical knowledge and skills to lead their life. Mathematics is considered as an important subject for effective citizen and personal living. Ex-Kamaiya Tharu students are week in mathematical performance so it is necessary to find the problem faced by ex-kamayas students in

learning mathematics .In this content was attempted to answer the following questions;

- What are the problems faced by Ex-Kamaiya Tharu students in learning Mathematics at primary level?
- How the Ex-Kamaiya Tharu Children face the mathematical problems related with their society?

Objectives of the Study

Based on the research Questions mentioned above, this study aims to fulfill the following objectives,

- To explore the problems faced by Ex-Kamaiya Tharu students in learning Mathematics at primary level?
- To analyze the problems faced by ex- kamaiya Tharu Students in learning mathematics .

Signification of the Studys

The population census, 2011 has also confirmed that there are 125 different castes and ethnic groups, and 123 mother tongues as national language. And when we think about medium of instruction policy imposed in schools, it is monolingual policy, i.e. Nepal; the official language is used as the medium of instruction, which is too problematic for learning to those children who have different mother tongues and cultures. Apart from that the formal and informal code of measurement and language, elaborated and restricted code of use in home and school environment also influence children's learning mathematics.

Mathematics has always held a key position in the everyday activities and in the school curriculum. Supporting this views D' Ambrosio (1985) write " if one asks about the expectation of children finishing compulsory primary education there is no answer other than going on further education. Then, we have to agree with the two major objectives of post primary education

I) to facilitate the process of adjustment to adult economic and social roles and

II) to offer opportunities for continuing education to those who have the motivation and the drive.

Usually asking for better preparation to pass competitive examination schemes to enter the universities rather than to better fit the young individual to social and economic role. Particularly this causes a serious obstacle for the improvement of secondary school system. “This expression has revealed that primary education is most important for people on their daily jobs rather than for further education. According to NEC 1992, the seventh national educational objective is to bring the socially backward group of nation into the mainstream. Many of the countries in the world like Brazil, Ghana, Pepua New Guinea, Somalia, Spain etc. Ethno- Mathematical practices have been conducted in school. For instance, IMP (1981) of Papua New Guinea reported that a locally developed textbook would enhance mathematics learning particularly in remote rural areas where current teaching conditions and lack of materials interact with poor English Skills to create and imbalance in achievement. The teacher needs to be aware of the culture background of his pupil’s to understand how the community uses mathematical knowledge in its cultural activities. He needs to develop mathematical behaviours which is built by understanding rather than rote learning (London, 1996).These facts reflect that ethno-mathematical practice is the most important in primary level.

Recently Nepal has adopted a policy of free and universalization of primary education. NEC (1992) has recommended that primary education can be given in mother tongue. The subject, math’s has been accepted as an important compulsory subject since grade one. No place is given in the curriculum to have ethnic maths. However, the new curriculum (NEC 1992) has opened a new policy to have a local curriculum. If primary education is given in the mother tongue, what should be the content of mathematics in primary level? This study is the study of indigenous counting and measuring system of Ex-Kamaiya Tharu community. The nature of mathematics is explored systematically and can be use in the curriculum. This study in this direction would be culturally very important. The following are the significance of the study;

1. This study would cooperate to policy maker and curriculum designer.
2. This study would help to the Mathematics curriculum designers to design better curriculum according to different socio-economic status.

3. It would also be helpful for Mathematic education, Mathematicians and Mathematics teachers to understand problems of Ex-Kamaiya Tharu students and that how they count, calculate and use in classroom teaching of Mathematics.
4. It would provide a better achievement to the children in their learning Mathematics by involving, interacting, participating and competition their values according to their community.
5. This study would be helpful for further researcher.

Delimitation of the Study

This study was based on the data and information collection for primary level in Kailali district of Shree Saraswati Secondary School Durgauli, Kailali. The researcher wanted to explore and analysis the problem of Ex-Kamaiya Tharu students in learning mathematics. The study mainly concerned about the problem of every day life, cultural differences and discontinuity theory on learning mathematics. In this Study the investigator used some factors of problem on mathematics learning at primary level. They were parent's education, parent's occupation, family income, home environment, cultural differences and discontinuity. The Study used primary data from In-depth interview, observation form and Focus group disscussion. The secondary data would collect from the review of previous literature and documentation.

- This research was carried out in Durgauli 1, Kailali district.
- The study was limited to the Ex-Kamaiyas Tharu students of Saraswati Secondary School, Durgauli 1, Kailali.
- The study was conducted within two male and two female students of primary level.

Definition of the Terms

The terms used in the present study have been defined as follows:

Primary Level Students: The group of students who study at primary level of School .

Parents Education: This various has been included in this category.

IIIiterate: People who were unable to read and write.

Literate: People were who able to read and write.

Educated: People who have passed at least SLC.

Parents Occupation:

The occupation of parents were categorized in to the following ways .

1. for engaged in service (workers)

2. for engaged in agriculture

Family income: The sum of monetary earned by family from different sources such as agricultural production, livestock selling , livestock production, cottage industries, business, pension and other are defined as family income.

Home environment: Physical environment of home and around it.

Cultural differences: increasingly managers must deal with multiple ethnic groups with very different cultures.

Discontinuity: An interruption in the normal physical structure.

Ex-Kamaiya: The people who work to other's house for survival due to the lack of economic condition and day to day survival materials. Now they are freed due to act of institution, are called ex- kamaiya.

Chapter II

REVIEW OF RELATED LITERATURE

The related studies construct the platform for standing to the research and periphery of the subject matter which give the theoretical support for the study. There are several studies about the development of ethnic group's mathematics. Some of related literatures which have reviewed by researcher are as follows:

Upadhyay (2001) did a research on "Effect of Constructivism on Mathematical Achievement of Grade V Students in Nepal". The research was conducted with three key works: Action, Reflection and scaffolding. The main aim of this research was to advocate and adopt constructivism in mathematics teaching in Nepal. In research the researcher concluded that the possibility of constructivism in Nepalese school was significantly different in achievement than conventional method of teaching.

Shrestha (2001) on his master thesis entitled "Learning of Mathematics in Social-Cognitive process." The relation between home situation and schooling of Tharu children were described in the thesis. Tharu children's home situation did not favor them to use most of the knowledge learned in school to their lives. The study concludes that Tharu children learn at their home and school, but the content of the school was not relevant to their life situation. The study was confined to understand for learning skills related to sanitation, nutrition and health, social norms, and value. Also there was a wide gap between home and school learning of Tharu students. This gap created dilemma to Tharu student and the school was also unable to address such dilemmas. Students were also unable to maintain balance between these dilemmas. Their home situation did not favor them to use most of the knowledge learned in school to their lives.

Rai (2003) conducted a master thesis entitled "Learning in mathematics in Social-Cognitive Process". It has discussed on the relation of culture and learning. Rai has concluded that the disadvantaged children of their result were by social-cognitive process. There were gap between everyday learning and school practices. There were discontinuity between learning strategies of the children at home and school. There were conceptual gap and different cultural assumption about the world and human

relation. That was the causes difference and discontinuity between the culture at home and school.

Baral (2004) did a research on " A case study of Street children for learning Mathematics". The main object of this study was to investigate how the street children learned mathematical skill. Different tools such as observation and interview were applied to investigate their learning of mathematical skill and Vygotsky's social constructivism theory was applied to analyze the data. He concludes that street children of the Kathmandu valley had basic mathematical knowledge. The level of their skill was different according to the work where they involved in. They have learned according to work where they involved in .They have learned counting , adding , profit and loss , gain , discount as they interacted with their environment of their adults all these skills which have helped them to live on the street where learnt mostly from experience situation and the culture where they living on since they landed on the street private speech observation , advice them adults and peers and imitation were the sources of learning mathematical for them .

Khadka (2006) did a study on "factor Influence the attitudes towards the leaning mathematics to children of Ex- Kamaiyas ". The objectives of the study were to find out the factor influencing the attitudes towards leaning mathematics to the children of Ex- Kamayas in Kailali district. The study also concluded that school / physical condition , socioeconomic status of Ex-Kamaiys teachers attribution and expectation usefulness of mathematics mechanism distribution of incentives , average of focused children , parent low involvement in education were found the most influencing attitudes in learning mathematics.

Lamichhane (2009) in his research entitled "Difficulties faced by Tharu students in learning mathematics at primary level" shows that tharu students are unable to approach the school due to poor economic condition, Due to the lack of proper environment at home and school that creates the difficulties in mathematics learning. It is also found that due to unmatched culture at home and school that arise the difficulties in mathematics learning and language problem that creates the difficulties in mathematics learning.

Bam (2010) did a study on "Problem faced by the dangaura tharu students in learning mathematics" a case of Kailali district. The objective of the study was to find

out the problem faced by Dangaura Tharu students in learning mathematics of primary level and the influencing factors of Dangaura Tharu level and the influencing factors of Dangaura Tharu students to learn mathematics. The result also showed that due to lack of trained teachers, inappropriate curriculum, unavailability of text, books, lack of practical knowledge of the teachers there were the difficulty in learning mathematics of Dangaura Tharu students.

Theoretical Framework of the Study

In this chapter, the researcher introduces the theoretical discussion, which is relevant for the interpretation of the finding of the study. There are various theories related to children learning and development they are : Operant-conditioning , Gestalt theory, theory of fear, theory of school effectiveness, trial and error, social learning theory, cultural difference and discontinuity theory, everyday theory, social construction, constructivism and so on. In this study the researcher would used everyday life theory of Madson and cultural difference and discontinuity theory of Ogbu.

Everyday life Theory

Since every individual is number of a family/society, s/he willingly or unwillingly performs certain action and activities that determine her/his everyday life through which s/he learn to adjust her/himself in the society. Although the activity of everyday life of people either is obligatory or optional, people learn to arrange/adopt strategies for learning, knowledge building and to derive meaning in their life. The study of everyday life would be useful for understanding and deriving meaning from the action and activities of every individual in their everyday life accomplished through spontaneous and taken for granted more. Madsen (2001) conceptualizes everyday life as everyday works of individual that gives certain meaning.

In addition Madsen (2002), further illustrate, everyday life is to be understood as a large number of heterogeneous activities human beings deals with ‘Everyday life provides framework for individual’ works that guides to bring and sustain meaning from variant and manifold activities. Everyday life is what people perform and how they perform that activity in a taken-for- granted manner.

Cultural Differences and Discontinuity

John, U.Ogbu (1982, 2000 and 2001) sees learning as the product of the cultural and language differences but rather he insists on the nature of the relationship between the culture/language of disadvantaged dominant groups. Cultural discontinuity theory of Ogbu (2000,2001) that deal with the problems in children's learning caused by the difference and discontinuity between the cultures of home and school. Those children, whose home cultures are much similar to the cultures of educational system as they have similar cultural can cope easily with the system that they 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 reorganization of their cultures and they have to work hard achieving learning out comes prepared to the children with good matched.

Ogbu (2001) state that: - learning not only as the product of the cultural and language differences but rather he insists on the nature of the relation between the culture and language of minority/disadvantaged and dominant groups. The dominant groups control the school system through implementing their curriculum and using their language as the only means of instructions. Regarding cultural differences, identity and school learning, he has put the examples which are based on the case of the US. He has identified the features of cultural differences mainly of three types of minority groups: Autonomous, Voluntary and Involuntary minorities.

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 contact with existing culture of dominant group of population. Primary cultural discontinuities are often associated with immigrants at attending schools in their host societies and with people being introduced to western type school. In case of Nepal, Schools are also influenced by western schooling system as a consequence of donor network, modernization and globalization process. Ogbu emphasize that through schools are establishes for the purpose of helping and abetting children in their personal development and modernization of nation, there is no doubt in disrupting the transmission of the traditional culture of people.

Ogbu also focuses that secondary culture discontinuity is involved after members of two population/community groups with distinct cultural background have

been in touch or they have started to participate in an institution like school which is control by another group, the dominant one. The dominant group sets schools system in accordance their own convenience and benefits an there norm, values and aspiration in the curriculum medium of instruction and teaching/learning approaches that suit to them.

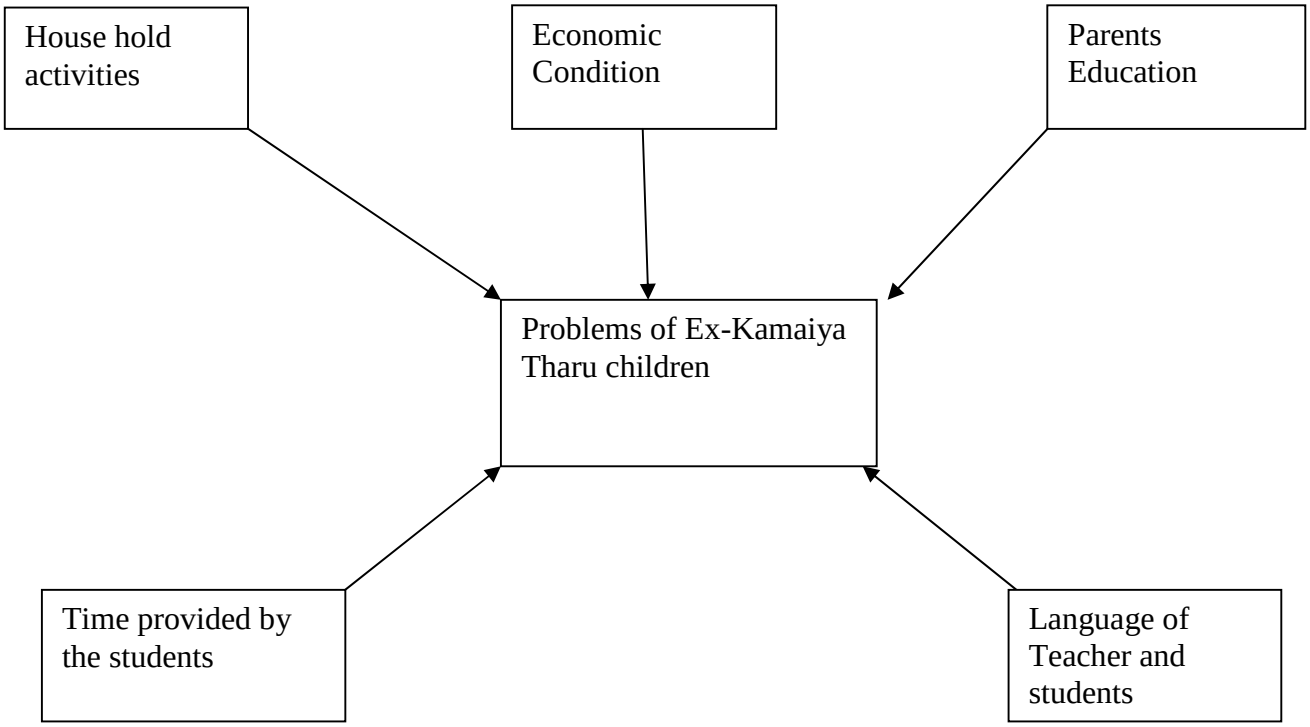
Similarly a society, on which cast like minorities due to cast like stratification and discrimination is found, comprises secondary cultural discontinuity. Cast like minority has been incorporated in to the society rather involuntarily and permanently lacking in job and status in the society. Due to collective institutional discrimination and display like school system, they tend to exclude from the mainstream with social and economic problem that lead their lives to miserable condition. In these circumstances, the children from disadvantaged cast tend to develop coping behavior and attitudes that are different to school culture that abstract their learning, Ogbu(1982).

Since secondary cultural discontinuities are developed by structural discontinuity in the society, they are difficult to identify, point out and locate in school due to their defuse nature with a deep root in the society. They are generally as a response to a contact situation involving the domination of one group by another subordinate group.

The features of secondary cultural discontinuity are less specific, more defuse and stylistic that creates difficulties in identifying and comprehending them. There is always a dilemma situation that the dominant group does like know or doesn't want to know about cultures of subordinate by saying difficult to know because of the multicultural existence of children in school/society. It is just on escaping trend and nature of the dominant group, the higher cast people from including the subordinate or disadvantage group in to the mainstream. Similarly, although the subordinate groups know the culture of dominant group, they do not need to practice other's culture because their tradition doesn't let them to act like members of the dominant group. So, in this study we discuss what type of cultural discontinuity was dominantly prevailing for the Ex-Kamaiya Tharu. And the theory describes social structure but their micro cultures in every household. In this consideration, the researcher discusses everyday life theory to find out the children home, culture and their interpretation to it.

Conceptual Framework

The researcher deals about the conceptual framework for the research, it deals about researcher's own concept to conduct the research in an original way. The conceptual framework was established on the basis of research topic possible area to fulfill the objectives and theoretical framework.



Chapter- III

METHODS AND PROCEDURE

This is a case study about the problem faced by Ex-Kamaiya Tharu students. So the qualitative technique was used to analyze the data. According to patton (1990), qualitative research accepts that people know themselves best and can describe, interpret and talk about their own environment.

Qualitative research involves the studies and collection of a variety of empirical materials, case study, and personal experience. Life history, interview, observation, instructional and visual texts that describe routine and problematic moments and meaning in individual's lives are its tools for data collection. Qualitative research is a form of inquiry that explores phenomena in their natural settings and uses multi-methods to interpret, understand, explain and bring meaning to them. These data and information are collected through using tools such as observation form, interview guideline and field notes. The rational behind the discussion of Ex-Kamaiyas Tharu face the problem in learning mathematics.

Qualitative research study things in their natural setting attempting to make sense of or interpret phenomenon in term as of the meaning people bring to them. Qualitative research involves the studies and collection of a variety of empirical materials.

Design of the Study

This study was based on case study research in finding problems faced by Ex-Kamaiyaas Tharu children in learning mathematics. This case study research design based on that especial concerns with exploring meanings and the way that people understand things so this is qualitative research. Qualitative research can be regarded as 'naturalistic inquiry' in a sense that it is conducted in natural settings by trying to avoid any intentional manipulation and distortion of the environment of the informants by researcher. This study also investigated real-world behavior as it occurs naturally whether it is a home or field of classroom or playground or in an institution (Tames and stigler 1998).

Site Selection

This study were related to problem faced by of Ex-Kamaiya Tharu children, the site selection was also a very important task for this study in order to find the appropriate information related to Ex-Kamaiya .This site selection helps me to know about the problems in learning mathematics in the tharu community students . From tharu community in Durgauli VDC,I choose two boys and two girls each who were engaged in their house hold activities rather than going to school were selected as the sample of the study .

Sample of the Study

This is a qualitative research. 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 inquiry depends upon the researcher what s/he wanted to know. In this research the researcher has selected 16 students of ex-kamaiya out of all students of class five. And finally the researcher has selected four students; two boys and two girls who can give appropriate and actual information to the researcher.

Due to above judgment sampling helps to find out effectiveness of research and was easy to find out the problem that they face in their habitual action.

As one of the non-probability sampling, the researcher has used purposive sampling to select relevant 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. Researcher informed them that after the observing their class work and homework to solve the problems on the mathematics. And researcher has discuss / interviewed certain questions related to their difficulty on learning mathematics and personal background. Thus the researcher studied of those selected Ex-Kamaiya Tharu students about 30 days. In this time the researcher has observed them carefully how they learn and what problems they feel learning mathematics. For this study purpose, the researcher has prepared the individual student record of all students studying at grade five and analyzed those files based on the criteria.

Tools for data Collection:

Qualitative method would consist many kinds of tools to get information during the research. Mainly there are three kinds of data used this research.

- In-depth-interview
- Observation form
- Written documents (published and unpublished)
- Focus Group Discussion

The date from interviews was consisted of direct questions to people about their experiences, opinions, feelings and knowledge. The data from observations consisted of detailed of descriptions of people's activities, behaviours, actions and the full range of interpersonal interactions and Organizational processes that are pate of observational process and human experiences.

These information are collected through using tools, observation, interviews, field notes and key children's diary. The rational behind the discussion of different cast was to find out their ways/ difficulties of learning mathematics. The researcher was adopted the case study of the four children, in-depth interviewed and participant as well as non participant observations to get the data for the research study.

In-depth –Interview

The in-depth interview is also known as unstructured or non directive interview (bailey, 1982; p. 201). In In-depth interview, the interviewer should devote a quite long time to develop friendly atmosphere with respondents. The researcher would take in-depth-interview of all four key children using unstructured questionnaires. After the observation and interview of the key children, the researcher also interview teacher who taught them mathematics and his\her parents.

For the research, all the required information was not possible together through the written test and observation. To clarify the information or to go in-depth of the information interview are much more helpful. So the researcher here carried out written test and observation as well as open ended interview to clear his/her difficulty regarding the study. Since some question should be raised according to the situations available. So the in-depth-interview was carried out. The researcher used this tool as

required to the key students and their math teachers. On the basis of objectives the researcher developed the interview theme in semi-structured form.

Observation form

There are number of techniques to get first hand information and observation which is one of the most useful tool for data collection in any kind of research study (K.C. 2000) wrote that the direct observation has the advantages of putting researchers was observed the activities of the key children in their class/school using the observation forms. Observation involves social interaction between researcher and their parents It helps to bridge and share the intimacy between researchers and the setting, which is under study by immersing researcher her/himself into the subject being studied. For purpose of collecting information the set of observation form would be developed by the researcher consulting with children and their parents.

Written Documents

The written documents are also known as structured tools for collecting data. Through this tool, researcher observe different types of written document in school and their home as well as anecdotal report, cumulative report, progressive report and their extra event which s/he has done. A written document involves social interaction between researcher informants through written data systematically.

Focus group discussion

A focused group discussion is a good way to gather people from similar back ground or experiences to discuss a specific topic of interest . The group or participants is guided by a facilator who introduce topics for discussion and helps the group to participate in a lively and natural discussion among themselves

Data Collection Procedure

The data collection procedure was conducted in two phases. At first the researcher visited at the selected school and met the principal / head of administration and explain the detail purpose of this study . The researcher took data,record sheet of students .

In second phase the researcher collected the open-ended interviews ,questionnaire with students, Mathematical teachers and their parents .And also researcher took class observation and focused group discussion .

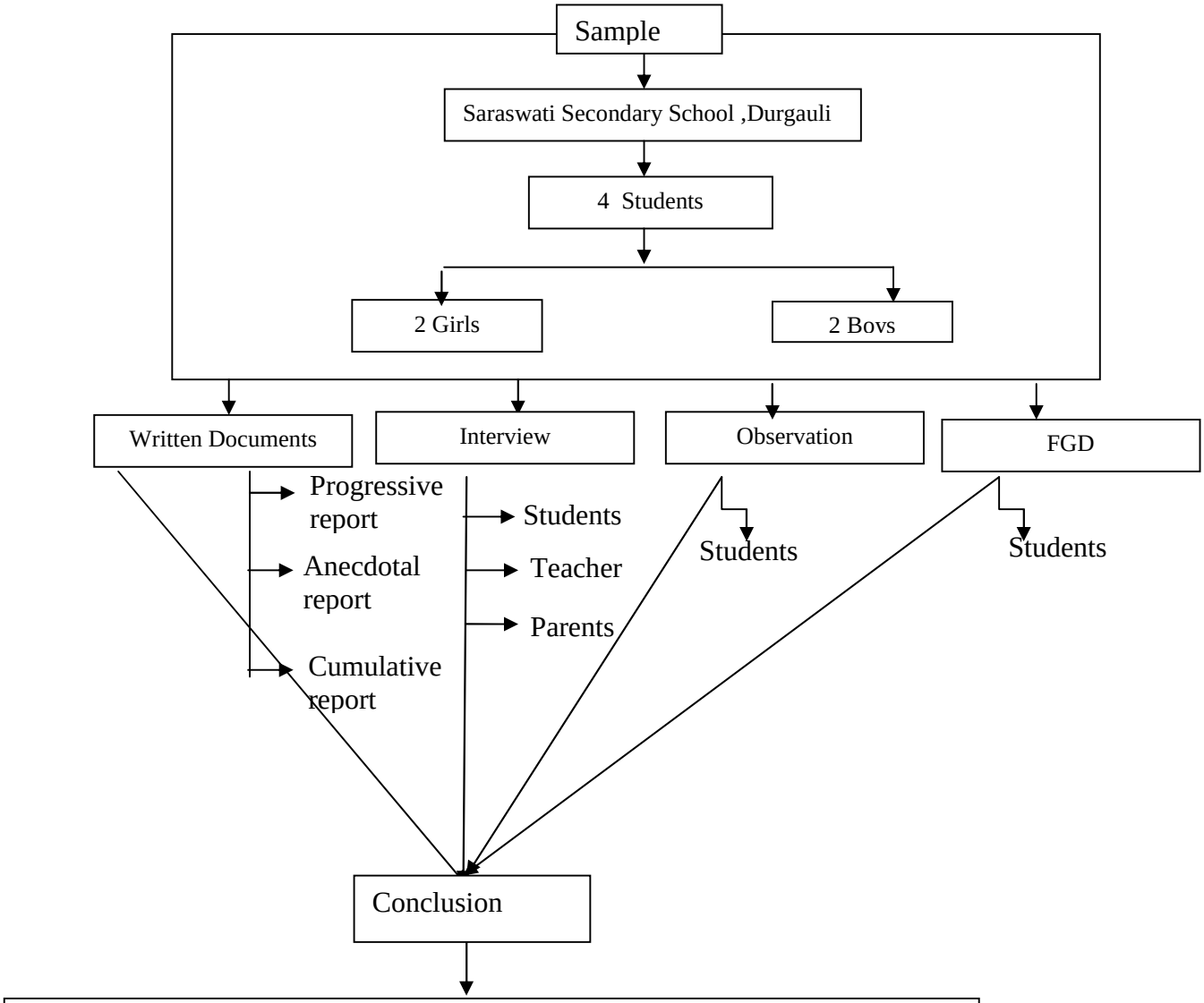
Ethical Considerations

In this study the researcher would also aware of some ethical issues and questions that were directly related to the respondents under study. To inform about the study, the researcher take their permission and consent for the time needed, observing their activities and recording their views. In addition, the researcher also has their acquiescence whether or not the researcher shall share their views with others, whether to reveal or to conceal their identity in the publics' spheres in other to discuss for the study purpose. In the course of using the names and castes of the key informants while preparing the study, before carrying out inquiry, the researcher was asked all the key informants and their teacher for their approval. The researcher was used unreal name but real caste as their wish. Then the researcher was selected the study in which the researcher get the instructions given by the key informants.

Analysis and Interpretation of Data

Analysis of data means studying the organize the material in other to discover inherent fact since the study was qualitative in nature. This data was studied from as many angles as possible either to explore the new fact or to reinterpret already non-existing fact. The method was used basically descriptive because this study describes the problems of Ex-Kamaiya Tharu. In other to analyze and interpretation researcher use descriptive analysis, identifying and logically in verbal way. The data were obtained from the observation, document analysis and in- depth interview. The data taken from the respondents were illustrated naturally and conclusion was drawn by describing it critically in verbal way.

Analysis Charts



Main problems of Students in learning Mathematics before or after completing research was due to the low socio-economic status and other affecting factors are

- homely environment
- education of parents
- structure of family
- language
- time provided by the students

Chapter- IV

ANALYSIS AND INTERPRETATION OF DATA

In this Chapter the collected information from the case students were interpreted. The data were interpreted and analyzed in the following headings:

Children's Life at Home

Culture is the most distinctive attribute of human race. Because of this quality, today human being is able to protect, transfer and improve 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, manipulation and interpretation of the culture; by virtue of human's cognition, today's civilization is possible (Katharine, 2004). Inside the cultural practices directly stimulate the mechanism of society and simultaneously affected the cognitive psychology of 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 being 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 of the Tharu students. The brief descriptions of Ex-Kamaiya Tharu students are given bellow.

1. Student-A

Student-A, the first case student of this research study is inhabitant of Durgauli-7 kailali. She is 11 years old now. She has to walk half an hour to reach the school. She studies in grade five in Saraswati secondary school. There are seven members in her family. She has to involve in household activities before and after her school. In the morning she goes to field to fetch grass for the animals. On the other hand, She goes to jungle to collect firewood. This situation indicates that she does not get time to practice mathematics at home. In the evening she has to help her mother in the kitchen to feed her younger brother and sister. Her academic activities at home are almost shadowed by the household activities. Sometimes she misses her class if it is harvesting time or time when her parents have to go to work earlier.

When the researcher collected the information about the economic condition of her parents, he found that they have only 5 kattha of land which remains barren

throughout the year. The average income of the parents is Rs. 20,000 which is not sufficient even for 4 months. They have to depend on the manual work as labor. The work is not always available. If they couldn't get work, they have to take loan from mahajans in advance to sustain their life. In the given economic pressure, the academic activities have become secondary for them. They even can't think of their childrens study or problems faced in particular subject. The case Student-A also whenever gets free, engages herself in those actives which could support her parents economically.

The researcher wanted to be familiar about their educational background. In this regard, it was found that both her father and mother are illiterate. They have not taken any formal education. Her younger brother and sister are now just admitted to a school. Being away from the touch of literacy, they are not aware about the importance of education. Though, they have sent their daughter at school, it seems to be formality not for genuine intentions. They rarely concern about her academic activities. When she has problems related to mathematics, she does not find anyone around her and she leaves it in due.

Besides this existing adverse situation at home, she has to face several other problems at school. Student- A feels inferior in her class because of her language. Tharu language is her first and mother language. The medium of instruction at her school is Nepali. Nepali as the second language is the barrier and comprehensive to her. She could not ask question in the class thinking that she couldn't speak .While she spoke her friends laughed at her. The school has not implemented the governmental policy of mother tongue education in primary level. So, children from this situation are compelled to learn from non mother language instruction.

The researcher asked about the Learning culture behavior of Maya with her mathematics teacher. The teacher told me that she got more difficulty in division algebraic expression multiplication by minus (-) word problem, taking L.C.M simplification and construction of angles etc. She gets more theoretical knowledge rather that practical knowledge. This was her main difficulty. They feel difficulty in algebraic expression. Since they don’t use it in their daily life.

2. Student-B

Student-B is a girl of 13 years old. She lives in Durgauli-1, Kailali. She studies in grade V. The distance between her house and school is about three Kilometer (approximates). She goes to school on foot. There are six members in her faimaly. She must be engaged on her household works. Student-B says; I have no more time to study due to household work (“Malai ghar ko kamle padhne phurshad hudaina”). So in her opinion, study is not important for a girl. Dil Kumari is very skillfull in her household i.e. cutting grass maintains pot. She cleans all the utensils and washes clothes, clean houses and finish other works. In the morning and evening she goes to the field to cut grass carrying Doko. Student-B bhanchhin "Dai e kam karke phursad naihuite (Student-B said that mother is never free to work other people. That's why Student-B did all house hold work. She helped her mother. Sometimes she goes to others house to bring wheat, paddy, and corn of "Manuri". (i.e. mother's working salary per-day).

When the researcher collected the information about the economic condition of her parents, he found that they have only 5 kattha of land which remains barren throughout the year. The average income of the parents is Rs. 25,000 which is not sufficient even for 5 months. They have to depend on the manual work as labor. The work is not always available. If they couldn't get work, they have to take loan from mahajans in advance to sustain their life. In the given economic pressure, the academic activities have become secondary for them. They even can't think of their childrens study or problems faced in particular subject. The case Student-B also whenever gets free. She engages herself in those actives which could support her parents economically.

The researcher wanted to be familiar about their educational background. In this regard, it was found that both her father and mother are illiterate. They have not taken any formal education. Her younger brother and sister are now just admitted to a school. Sometimes she has problem about mathematics but no one teach her because all family member are illiterate. Her parents never talk about her studies and never approach about education.

In her everyday life i.e. home culture or mother language to make her heisted to communicate the teacher and other friend. She used timi 'instead of Tapai. But in

her family she can 'use timi for all family members. Teacher didn't understand this informal language. But we can't use Timi for teacher. She learned dilatic language in her house. She used restricted language code, which is not used in school. The home culture does not support to learn mathematic in school. In everyday life she has silence culture. But in school there is elaborated or forward culture. There is discontinuity between silence and forwarded culture. These gaps create difficulty to learn mathematics. In school mathematics used meter, centimeter for measuring distance, kilogram, gram for weighting goods. Which is not used in her daily life (home or community) so she think school mathematics is not important for her life. She give less importance for school mathematics.

Student-B cuts grass and makes 'Dahkia' in her house using measurement scale 'hand' like Hat , Bitta , dela , Benthi etc. but in school she use actual measurement using scales , protractor , inch etc. Which is not use in her daily life practices? So Student-B felt difficulty to learn school. . Ex-Kamiya tharu children practiced and learned one type of mathematics units in measuring and weighing good in home / community that does not fit with school mathematics. The problem of mathematics is more difficult to her to solve the mathematics problem. When the researcher observed class she felt more difficult or confuse to multiplied by minus (-) sing in algebraic expression, unitary method, taking L.C.M. solving word problem. Her teacher also repeated that she felt difficulties while with negative sing and she can't give much more time for Student-B and due to frequently absent she also felt more difficult in learning mathematics.

3. Student-C

Student-C is 11 years old boy. He lives in Durgauli-6 kailali. He is 11 years old now. He has to walk half an hour to reach the school. He studies in grade five in Saraswati secondary school. There are Four members in his family. Student-C likes to read story books and newspepar. He is very much curious and intelligent. He does not forget to do his homework as he was a good student. He attends all the classes. He also participates in extracurricular activities. But some time he has to involve in household activities before and after his school. In the morning he goes to field to fetch grass for the animals. On the other hand, he goes to work in the field. This situation indicates that he does not get time to practice mathematics at home.

When the researcher collected the information about the economic condition of his parents, he found that they have only 2 kattha of land which remains barren throughout the year. The average income of the parents is Rs. 30,000 which is not sufficient even for 8 months. They have to depend on Rickshaw Rider as labor. The work is not always available means not earning sufficient income. If they couldn't get basic income, they have to take loan from mahajans in advance to sustain their life. In the given economic pressure, the academic activities have become secondary for them. They even can't think of their childrens study or problems faced in particular subject. The case Student-C also whenever gets free. He engages himself in those actives which could support her parents economically.

The researcher wanted to be familiar about their educational background. In this regard, it was found that both his father is literate and mother is illiterate. They have not taken any formal education. His sister is reading in class three in same school. Being away from the touch of literacy, they are not aware about the important of education. Thought, they have sent their daughter at school, it seems to be formality not for genuine intentions. They rarely concern about her academic activities. When she has problems related to mathematics, she does not find anyone around her and she leaves it in due.

Besides this existing adverse situation at home, he has to face several other problems at school. They had to use first Nepali language and second English language in school which was never used in their home. An Ex-Kamaya's tharu school children is obliged to learn three types of language , mother tongue (used in home), Nepali (usad in school) and English language simultaneously . Although the role of modern education system was contributing progressively for the betterment of the educational condition of Ex-Kamaya tharu students. Although the situation is still vulnerable and educational standard of Ex-Kamaya's tharu falls far below then the average standard.

His Father is busy to work in Rickshaw ride and Mother is also busy to house hold work. Although Student-C learn many skill from his father and his neighbour . But this skill which he has learned from his father is useless for learning mathematics in the class. In this way there was not any relation between his father’s skill and his learning process. There was ethno-mathematics in his house and standard or elaborated /formal mathematics in school. There is gap between

everyday mathematics and school mathematics. He learns one type of mathematics in his house/community. He never uses formula in house. so that way he is not to give sufficient time in Mathematics.The researcher observed and asked his teacher about his study. The teacher said, “He did his homework regularly. But he feel quite difficulty in solving word problem, applying formula, simplification multiplication and division of decimal number, measuring angles etc.”

4. Student-D

Student-D, the last case of this research study is inhabitant of Durgauli-5 kailali. He is 11 years old now. He has to walk half an hour to reach the school. He studies in grade five in Saraswati secondary school. There are seven members in his family. He has to involve in household activities before and after his school. In the morning he goes to field to fetch grass for the animals. On the other hand, he making fish net and some time he goes Majuri. This situation indicates that he does not get time to practice mathematics at home. His academic activities at home is almost shadowed by the household activities. Sometimes he misses his class if it is harvesting time or time when his parents have to go to work earlier.

When the researcher collected the information about the economic condition of her parents, he found that they have only 2 kattha of land which remains barren throughout the year. The average income of the parents is Rs. 40,000 which is not sufficient even for 10 months. They have to depend on the manual work as labor and some time his father goes to India for earning money. If his father goes to India at that time they have to take loan from mahajans in advance to it. In the given economic pressure, the academic activities have become secondary for them. They even can't think of their childrens study or problems faced in particular subject. The case Student-D also whenever gets free. He engages himself in those actives which could support his parents economically.

The researcher wanted to be familiar about their educational background. In this regard, it was found that both her father and mother are illiterate. They have not taken any formal education. Her younger brother and sister are going to same school. Being away from the touch of literacy, they are not aware about the important of education. Thought, they have sent their daughter at school, it seems to be formality not for

genuine intentions. They rarely concern about her academic activities. When he has problems related to mathematics, he does not find anyone around his and he leaves it in due.

One day Student-D raised question in the class without any hesitation. But the language which he uses is very poor like kina bhayo miss/sir bhani deu na instead of kina bhayako bhanidinuhosna miss/sir. In that situation teacher neglected his informal language and code language.He said that, Student-D does not talk to me like that you asked unreceptive/impolite language. This is school not your home said teacher. There is misunderstanding between student and teacher. Teacher did not care of his family background. The teacher think that Student-D did not care for diciplane. This misunderstanding made him depressd to coming times. After that, he did not try to ask question to his teacher. The researcher came to know that, Ex-Kamaya tharu student have one type of home culture /language (i.e. forwarded culture). This type of culture difference and discontinuity does support to learn mathematics.

According to him his performance in grade, III and IV was very good. Later on, he left his study and went India for earning due to his poor economic condition. He worked there for one year and then he returned back home and joined in grade five. When he was in grade three and four he was good at study but later on, he did not secure his previous position because he had already dropped out and another cause was that the mathematics of grade five, itself was hard for him. When the research observed & asked about Student-D's study. His teacher told that he was poor in mathematics. He felt difficulty in solving verbal problem in taking L.C.M. making equation etc. He was not regular in school.

Finally, as an observer, the research have indicate the everyday lives of four keys informants in the given chapter, by studying about all four children, we know that Ex-Kamaya children, got more difficulty in learning mathematics at school because they have no pre- requisite in their home . They had to engage in household work in morning and in evening. It was harder to study in case of girls. The researcher found that Student-A and Student-B had to finish all the works before going to school and they were not provided sufficient time to study at home. But in the case of boys, it was quite different they were also suffered from their home's environment for e.g. Student-C was not involved in household work so he got chance to study books but

Student-D had handled his house and worked in field, Home too. So he could not get chance to study at home.

Student-A also could not ask question to the teacher where she did not understand. She could use this language for her father & mother and other members of the community. She used friendly language at home like DAI BHAT DE NA (mother give me rice). They had to use second language Nepali and third language English in shool which was never used in her house. English was totally which is different from their home language (i.e chaudhary, Nepali and English) . Now a day the Government has changed the process of learning and the government is ready to give education in their own mother tongue language in primary level. But the Ex-kamaya tharu's student are deprived from opportunity because they do not have sufficient books in their own language and they do not have any awareness in the field of education.

Children's Life at school

Most of the people of parental generation are uneducated. They are only skilled to traditional pattern of fishing, making dhakiya, Bena and different type of traditional arts and other household activities. The dropout rate from school of children is excessively high. The boys of few generation are especially encouraged to continue the education and they are admitted the tradition value system of discriminating against girls also dominant girls are not encouraged to perform educational activity. The impact of media is supportive to face dual burden of study and household activities. In one side they are forced to take care of small children and also to help their mother in kitchen and other household work as an unpaid laborer, on the other side they are obliged to catch - up the daily stuffs created at school entangled with male adults also. The illiterate and uneducated parental generation cannot feel. The value of education as it should be which eventually result in high rate of failure and dropout in order to encourage girl students in education, the government had brought out the program to distribute two liter of oil and tiffin (i.e. Haluwa). At that time they were encouraged to enroll girls students in primary level but when the government stooped this program there was large number of girls' student dropping out their class. Beside this major factor of lingual problem is the reason of massive dropout rate of Ex- Kamaiya's tharu students from school. They have to use second or

third language in school and they use informal or code language in their community home.

Student learned by looking or by practicing in home. But in school mathematics is learned by logic using formula etc. there is a big discontinuity between home environment and school environment of Ex-Kamaiya, children. So they felt difficulties to learn mathematics. Simple problem like addition, subtraction and multiplication are not difficult to learn but taking L.C.M. of algebraic fraction, multiply by minus sign, word problem construction of angles, measuring angles are more difficult. According to ogbu (2000, 2001) learning takes place through environment culture between home and school.

They do the interaction between each other in symbolic single or code language. In case of Ex-Kamaiya's students they interact with their friends and teachers only formal language which is limited therefore in learning mathematics ideas sharing, co-operation and adjustment become difficult that create since the culture of home and school is different in terms of language code and teaching strategy of children at home is discontinuity, ogbu argued that due to the cultural discontinuity between home and school children felt difficulty in learning. In my opinion, that is not only the cultural discontinuity, but also discontinuity learning strategy of children at home and school. Home and school environment affects the learning of children. The researcher found the learning strategies of Ex-Kamaiya's children like observing activities and involvement in the real life activities are discontinued at the school that affects their learning.

Most of children have difficulty in learning mathematics in same area and difficulty is due to their cultural discontinuity. By studying about the factor influencing the learning of mathematics by Ex-Kamiya's children, there are many difficulties for them to learn mathematics. In one hand, they are forced to engage in household works by the demand of society. It is due to their weak economic condition 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. When they go to school for learning, they gave to accept different bad behaviours from their friends who are of other caste. Teacher also doesn’t give special attention to them as they treat all the students equally.

School and Home Culture

Since the everyday lives of the Ex-Kamaiya's children are not given emphasis for their learning in school practices, they always consider school as an artificial and incompatible institution so they neither assimilate nor accommodate into mainstreaming school system. In home, they learn by observing and doing things side by side but they do not get chance as such in school. There are great differences between the everyday life of Ex-Kamaiya's children and school practice. As the researcher have indicated that Student-A and Student-B have to be engaged in household works, they do not have time to study at home .Teachers don't ask these types of children about their home envirorment. Ex-Kamaiya's have difference between everyday life and school practices. In school they get theoretical knowledge but the knowledge were not used in their daily life. This difference between the practice of school and home creat difficulty for them to learn the theoretical knowledge. They practice practical works in their home like making Dela, bena, fishing net, and using hand ek bita, ek hat, ek gaj etc. But to solve problem using different for them. This discontinuity between everyday life and school practices make Ex-Kamaiya's children feel complicated in learning mathematics.

Since the culture of the home and school is different in terms of language, teaching style and the everyday lives of the Ex-Kamaiya's children in home and school is also different. In this situation, they have to adopt learning strategy differently. Consequently, they face problems in learning mathematics. Since the learning strategy for children at home is 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. Enviroment of home and school affects the learning of children. To sum up, the discontinuity between the culture, i.e. environment of home and school discourage (or not support) the mathematics learning of Ex-Kamaiya's children. Teacher never gives proper attention separately to the Ex-Kamaiya's children, influencing factor which have indelicate their very important because Ex-Kamaiya's children learn at home and school along with these influencing factors. Home is main area of learning for children. So home environment, school environment, parent's behaviours etc play an important role, similarly, behaviour of society and teachers also play the vital role for Ex-Kamaiya's children in learning mathematics.

Influencing Factors for Learning Mathematics

From the total involvement in the field, (i.e. interview for students, teachers and observation), the researcher found that there are many influencing factors for learning mathemstics of Ex-Kamaiya's children. They have fewer concepts about the modern measurement process and the main obstacle in learning mathematics. Ex-Kamaiya's children have the discontinuity between everyday life and school practices. The influencing factors are described below:

Role of Parents in Learning Domestic Work

In case of Student-B and Student-A they go to jungle to bring fodder. They are forced them by looking small brother/sister and also household works. Such learning situations give children more opportunities to participate, observe, reflect on and practices socially shared were of knowing and thinking. It developed work transmission from mother to daughter and from father to son. Ex-Kamaiya's Tharu children learn and develop a way of coping with situation and task, and particularly methodes of civilizing styles to the best situations. Here, their culture itself is influences learn and develops a way of coping with situation and task, particularly meathods of civilizing styles to the best situations. Here ,their culture it self is aninfluence factor for learnintg mathematics .For example most of the Ex-Kamaiya's Tharu student used traditional measurement toools like ek had, ek bitta , ek jag , Dela ,Dhakiya , etc in their house . In school student used special or standard measurement tools like kilogram, gram kilometer, meter, centimeter using formula like $(a+b)^2$,..... $(a+b)^3$ and protractor, scale, campass etc. There is no link between traditional measurment tools and standard measurement tools in the course book. The Ex-Kamaiya's Tharu studant learns traditional measurement tools from their parents and standard measurement tools from their parent learns traditional measurement tools from teacher. There is cultural discontinuity between traditional practices. Since everyday live of the children were not reflected into the school practices, they got barriers in learning mathematics.

Domestic works help a lot in learning something. In this research what the researcher found is that male people of Ex-Kamaiya's Tharu community do not tike part in domestic works. Sons pretend not to know how to the household works and

their parnts also do not prefer their son to do household works. Due to this habit and behavior male member don't get chance to learn domestic works.

Interpersonal Relation

When the researcher asked to Student-C, why do you often remain silent in the class? He replied, Student-C is afraid of asking questions to teachers. Student-C feels problem to ask questionas in the class dueto his language.What ever he spoke his teacher do not understood and becomes angry with Student-C . It seems that the lack of interpersonal relation skill with caste people.Student-C couldn't interact well with his friends also . It seems that he has development the culture of silence. The main influencing factor for the lack of interpersonal relation skill is the nature of the relationship between the disadvantage culture (silence) and dominant higher caste culture. The Ex-Kamaiya tharu children one found afraid of raising question to the teacher with high caste culture. It made to sit silence either they understood or not understood.

As the researcher have observed four keys children informants, the researcher found that there is not good communication between Ex-Kamayia tharu and other children. They eat together, sit together, but their company is different.The key children feel shame to ask anything with teachers and they don't speak more with other children. Their interpersonal relation with other children is not developed nicely. Higher caste children raise more questions but Ex-Kamayia tharu do not raise because lack of the interpersonal relation with other. Due to the behavior of other children towords them, they feel quite serious. Society also makes them feel that they must have separates Ex-Kamayia tharu from community. The Ex-Kamayia tharu student particularly Student-A and teacher had different views about how student should interact with teacher among students. She used to the language to the teacher like 'timi' instead of 'tapai' when she reacted with her friendly language, the teacher said don't you know how to speak with teacher? The researcher found that their langauge created cultural misunderstanding with teacher. It influenced get learning mathematics at school. Similarly Student-B sometimes used informal langauge knowingly or without knowingly. The reason behind she used this word for her parents, which was common in family so, she also used such language for her teacher. It shows that the culture of home is also influencing factor for the learning

mathematics of Ex-Kamayia Tharu children. So interpersonal relations also influence to learn mathematics and they felt difficulties in learning mathematics.

Role of teachers' behaviour in Learning Mathematics

As we talk about the role of teacher in the learning process of Ex-kamaiyas tharu children there is the great importance of teacher. Teacher usually treats all the students equally. We found that they don't treat extraordinary to Ex-kamaiyas tharu children. Ex-kamaiyas tharu children should be given extra attention but this is not done in our schools due to which Ex-kamaiya's tharu childrens feel difficulty in learning mathematics. It is more complicated because mathematics is much harder subject to them than other subject. It is because Ex-kamaiya's tharu children are involved in practical works at home like making mechia(cot), jand(wine), fishing net, wood Material etc. But their study in the classroom, they find totally different process of learning because they find more theoretical knowledge rather than practical one. There is cultural difference and discontinuity to learning and measurement pattern at home and school. This is the reason that Ex-kamaiya's tharu children feel more difficulty in learning mathematics.

Misunderstanding between mother tongue (Culture) and Target language

When the researcher observed the activities of grade V he found that there is cultural misunderstanding between Ex-kamaiya tharu children and other cast children as well as between teacher and Ex-kamaiya's tharu children. Children use friendly language with their teacher and they want to become very close with the teacher but teacher does not like their informal behaviour. Teacher and other castes students want to listen formal and respective languages. This cause their relation between teacher and Ex-kamaiya's tharu children and their friend is not good, so that Ex-kamaiya's tharu children can’t further question with teacher & with thir student. So, Ex-Kamayia Tharu student particularly Student-A and teacher had different views about how student should interact with teacher amongstudents. She used language to the teacher like ‘timi’ instead of ‘tapai’ When She reacted with her poor and disrespectful langua ge, the teacher said does’t you know how to speak with teacher?

The word used by Student-A, on short was impolite, irrespective to the teacher, father, mother and so on. She learned this restricted language in her family\community transmitting from her parents. The researcher found that her

languge created cultural misunderstanding with teacher. It influenced learning mathematics at school. When the teacher asked, Student-A often gave answer by sitting on the bench; the teacher shouted Student-A standup and speaks. When these differences occur, there arise cultural misunderstandings. While learning mathmatics teacher notices more about their language because of which understanding environment does not occur. Due to this misunderstanding, Ex-Kamayia Thuru student feel diffculty in learning mathamatics.

Lack of Concept about Modern Measurement

It is a cultural belief that Ex-Kamayia thura children have different concept about their life. Other caste people think that life is precious and that they have to do something important to make their life precious. But Ex-Kamayia Tharu themselves make their life meaningless thinking that they don't have to do something useful. They drink 'jad' (i.e. local alcohol) and alcohol till senseless. They don't study hard.They feel they don't get anything by studying. Due to this assumption. They have kept theemaelves backward in the society. Due to the lack of actual concept about the measurement, they feel diffcully in learing mathmatics. In the house of Ex-Kamayia tharu children, they use their hands and doori (rope) to measure length to fish net, bat, wood Material etc. instead of using ruler. They don't have concept of using scales.

Impact of Home Environmssent

Home is regarded as the first school to all individual. They learned how to behave, how to respect, how to cooperate each other etc. So the home culture affects their daily life. Ex-Kamayia tharu children use their own language in his/her house. They use such type of language in counting system. They are given below:

1=Ektho	2=Duitho
3=Tintha	4=Charatho
5=Panctho	6=Chhauto
7=Sathatho	8=Athatho
9=Nauthao	10=Dashthao etc.

Lack of concept of modern measure scale. In gaining, weighing good also, they don't have concept of modern kilogram and gram. Due to the lack of these concepts, they feel complicated in learning mathematics at school. Due to the impact of home environment Ex-Kamayia tharu children have great discountinuty betweeninterpersonal relation, language, modern measurement etc. That has been found in observations which creat diffculty in learing

mathematics. The home environment is not supportive to learn mathematics at school. These Discoutinuities create difficulties in learning mathematics.

Analysis of the Problems

Home and School Environment: Ex-Kamaiyas Tharu Children's home and school environment is totally inverse. In home they learn traditional measurement tools but in school modern. In home they use like ek hat,ek bitta as a means of measurement tools but in school they learn modern measurement tools like as one meter,two kilommeter .So the learning environment is different in home and school . That is why the achievement in mathematics is poor.

Language: Language is next factor that influence learning mathematics to the ex-Kamaiya Tharu children .Most of the Tharu children feel difficult to speak with their teacher. Tharu childern they do mistake while speaking Nepali languge and use wrong grammatical structure such as they use "Timi" instead of "Tapai".They even say " Timi le yo prasna ko answer bhandeu na sir ".

Poor Economic Condition of Family : Economic condition of a family is another influencing factor for learning mathematics to Ex-kaimaiya Tharu children.If we view the economic condition of Ex-kamaiyas, they have below poverty line life style .Most the time they past earning money for their family . They don't have money to buy copy and other instructional materials .They compel to go for labor (Manjuri) for their family. So, poor economic condition of a family is the major influencing factor for learning mathematics to ex-kamaiyas Tharu childrens.

Education of Parents: Because of lack of parent's education there is difficulty in learning mathematics to the ex- kamaiyas Tharu children. They have psychologically effect in learning .Uneducated parents they unable to guide to their children. Even they do fulfill their basic needs for learning. Lacks of education, their parents use them as a labor in their house. They don't provide enough time them for learning to them.

Time provided by the students: Most of the ex-kamaiyas Tharu childern they don't have enough time for learning mathematics. Most of the time they past doing their house hold work. They don't have time to do home work .So, they become poor and poor to their study. Because of time most of the time they miss their school class .Because of lack of time they don't involve in any extra- curricular activities of school. Even they don't interact with their friends about their study.

Chapter- V

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter is basically concentrated in deriving some findings from the discussion of chapter IV. Besides findings and conclusions, it also comprises some educational implications.

Summary of the Study

Mathematics is a language which is a 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, engineering 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. Either it is science or technology, social studies, like economics, management etc they need mathematics for advanced study. The twenty first century is based pm the computer information technology and it is all based on mathematics or equivalently logical thinking.

Since the time immemorial, these Ex-Kamaiya tharu people are being discriminated, humiliated and disadvantaged socially, economically, culturally, and politically in the society by the other caste people and the state on the name of ethnic group.

This is a case study about problems faced by Ex-Kamaiyas students in lerning mathematics. Hence this study aims to identify and suggest

- To explore the problems faced by Ex-Kamaiya Tharu students in learning Mathematics at primary level?
- To analyze the problem faced by ex-kamaiya students in learning mathematics.

The research was conducted in Shree Sarswati Secondary School Durgauli-1, Kailali.

The design of this research is 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 Ex-Kamaiya Tharu School children were carried out through observation and interview (where needed).

For the case study, two boys and two girls studying in class V were taken as the sample. To support the findings of the study, John, U, Ogbu's theory of cultural discontinuity were also.

Findings

This is basically concentrated in drawing some findings of the study from the discussions of different chapter included in it.

The student who have same culture at home and school, the also felt mathematics as difficult subject. In case of Ex-Kamaiya Tharu learning mathematics is challenging and more difficult process. On the basis overall study and information provided by students, that they do not have same culture in home and school. There is discontinuity between home culture and school culture. There is discontinuity between traditional measurement and modern measurement. These gaps crate influencing factors in learning mathematics.

The Ex-kamaiya's Tharu children have poor Nepali language (i.e. dialectic language) in home, which did not fit with school language because the teacher ignored them as irrespective/ impolite language. Their language was not understood properly by their teacher. The poor (Nepali) language of the children used as the main barrier for their learning. The barrier isnot only their poor language but cultural discontinuity is also the main factor that learning mathematics of the Ex-kamaiya's Tharu children.

Since the culture of home and school is different in terms of language, measurements units and teaching procedures, the everyday life Ex-kamaiya's Tharu children in home and school is also different. In other to cope with diffferent situation and task they have to adopt learning strategy differently. As a result they faced problem in learning mathematics. There is discontinuity between silence culture and forwarded culture.

The researcher found that Ex-kamaiya's Tharu children students facing following difficulties while learning mathematics.

- Ex-kamaiyas Tharu children have great discontinuity between their everyday life and school activities as they get practical knowledge in their home and theoretical knowledge at school for example most of the Ex-kamaiya's Tharu children used to traditional measurement tools like ek hat, ek bittaa, manna, Chetuwa, Dela etc. in their house. In school student used special and standard tools like kilogram, gram, kilometer, meter, centimeter using formula like $(a + b)^2$, …….. And protactor, scale, compass etc. There is no link between traditional measurement tools and standard measurement tools in the course book. The Ex-kamaiya's Tharu children learn traditional measurement tools from their parents and standard measurement tools from teacher. There is cultural discontinuity between traditional practices. Therefore the achievement in mathematics is poor.
- Because of economic problems of ex-kamaiyas Tharu children,there is problems in learning mathematics. Due to lack of money they can't buy their pencil, copies and other necessary instruments. The economic condition and learning mathematics is co related .Thus there is problems in learning mathematics to ex-kamaiyas Tharu children.
- The teacher has not played the role to bridge the discontinuity between students and teachers misunderstanding Ex-kamaiya's Tharu children's friendly behaviour with the teacher is not understood by her. For Example, the Ex-kamaiya's Tharu childrens particularly Maya Kumari and teacher had different views about how students should interact with teacher among students. She used language to the teacher like 'Timi', instead of 'Tapai'. When she reacted with her poor and irrespective language, the teacher said doesn't you know how to speak with teacher?
- Most of the ex-kamaiyas are uneducated. They don't know the importance of education also. Similarly, they also unable to guide and counsel to their children for learning. They don't think education is the first priority for life. Because of illiteracy they don't send their children at school regularly.So,this is the main cause of low achievements in mathematics.

- The ex- kamaiyas Tharu children can't give enough time to their study .Most of the time they pass in their house hold activities. If they have leisure time they help to their parents.Lack of time they don't do their home work and study properly .As a result the achievement in mathematics seems poor.

Conclusion

Regarding these above findings, the researcher has derived this clusions.Ex-Kamaiya Tharu is considered as the minority group.They have their own culture and tradition as well as their own mother tongue language. They are deprived of different opportunities such as employment; education etc.There is cultural discontinuity between home environment and school environment. They are unaware about the modern measurement system in mathematics learning. For example the standard unit kg has to relate with mana, Dela, Dhakiya. This is the every day use language of the students. Due to their own language there is misunderstanding between the teachers and the Ex-Kamaiya Tharu students. The Ex-Kamaiya Tharu has developed a dominated nature. In every field whether it is in the home/community or in school, they have to be dominated, humiliated and oppressed due to their cultural language. Specially the parents of those students use to work as Manjori (Labor) for earning.

Due to the lack of trained teachers, inappropriate curriculum, unavaibality of text books, lack of practical knowledge of the teachers, there is difficulty in learning Mathematics to Ex-Kamaiya Tharu students.

Recommendations for Education Implication

Teacher can relate the everyday learning with teaching-learning activities by reflecting their previous experiences in the home/ community where s/he had preformed different everyday activities for instance, telling how s/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 teacher preparation about effective pedagogy can be another alternative for improving the situation in understanding the poor language of the children. In order to develop effective pedagogy that can understand children’s culture it should be understood in line with learning and participation of the children like the Ex-Kamaiya Tharu by considering their culture, language, traditional measurement and needs. The teachers have to create situation that can be bridging between home and school practices.

- Schools must apply practical knowledge based activities also which can promote their previous experiences.
- Teacher must play a vital role in bridging the gap between the interpersonal relation among them and the Ex-Kamaiya Tharu Children. They may create an environment to understand their feelings and behaviors.
- There is a gap between the concept gained in school and its use in their home, so the teacher should relate it.
- Teacher should use local teaching materials while teaching mathematics.
- Teacher should use local language as well while teaching.
- Class room management should be highly concerned.
- Inclusive Education should be highly focused.
- The mathematics teacher should be encouraged to use co-operative learning teaching mathematics.

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APPENDIX – A

Sample of Open-ended Interview for Students

Name : Date.....
Address :
Level :

1. How did you feel learning mathematics?

   .....

   .....

2. Did you have sufficient time for learning mathematics?

   .....

   .....

3. What is your parent's occupation?

   .....

   .....

4. Does your parents are educated?

   .....

   .....

5. Do you like reading mathematics?

   .....

   .....

6. Does your teacher helps you solving mathematics problems?

   .....

   .....

APPENDIX – B

Sample of Open-ended Interview for Parents

Name : Date.....
Address :
Level :

1. What type of occupation do you serve?
   .....

   .....

2. Can your able to read and write?

   .....

   .....

3. How many members are there in your family?
   .....

   .....

4. What is the sum of monetary value earned by yoyr family per year? (In average)
   .....

   .....

5. What types of facilities are providing to your children to study?
   .....

   .....

6. Are you satisfied the mathematics achievements of your children?

   .....

   .....

APPENDIX – C

Sample of Open-ended Interview for Teacher

Name : Date.....
Address :
Level :

1. What are the factors that are responsible for low achievements of Ex- Kamaiya Tharu Students?

   .....

   .....

2. What problems so you see at the primary level maths teaching?

   .....

   .....

3. Why are the affecting factors of Ex- Kamaiya Tharu students learning mathematics ?

   .....

   .....

4. Are Ex-Kamaiyas Tharu Students take regular class?

   .....

   .....

5. Do the Ex-Kamaiyas Tharu Students complete their home work?

   .....

   .....

6. How Ex-Kamaiya Tharu students be good in mathematics?

   .....

   .....

APPENDIX – D

Sample of Focus Group Discussion

Name : Date.....
Address :
Level :

1. Do you discuss with your friends while learning mathematics?

   .....

   .....

2. How do you feel learning maths ?

   .....

   .....

3. Do you use mathematics at your home which you're leaned at school?

   .....

   .....

4. Do you have sufficient materials related to the subject?

   .....

   .....

5. Which topics do you feel more difficult?

   .....

   .....