

Chapter – I

INTRODUCTION

Background of the Study

The history of human development and civilization shows that the science and technology has been developed gradually. Mathematics originated along with the origin of human civilization. In this world, it is very difficult to live without more or less knowledge of mathematics. After the invention of fire and agriculture, human being started the counting system. Shepherds used to count their sheep by drawing lines or using pebbles of stones, pieces of woods and breaking twigs.

Mathematics is a vague term. Generally, we mean mathematics is the science of counting or study of numbers. The word “Mathematics” has been derived from an ancient Greek words mathematics” which meant “to learn”. It seems to indicate that mathematics was considered as process of learning and interpreting the natural phenomena or surroundings of an individuals. Historically, mathematics as a discipline, it is the outgrowth of different human civilization in developing rules, formulae and mathematical systems based on solving their social problems for the continuation of the society.

Mathematical structure is categorized by undefined terms, Axioms and rules of logic. “Mathematics is a part of the experience of all people regardless of how far they have gone in school. It is main foundation of scientific world as we live in today. The great advance which civilization has made in science and technology could not have been made without advancement at mathematics.

The history of mathematics can be equated with the history of human civilization, regarding the context of origination of mathematics. Douglas and Robert state in the points as:

“Mathematics arose from the needs of organized societies of people. Imagine of primitive tribe living by hunting and collecting the natural harvest of forest and field. Rudimentary forms of counting are needed to communicate numbers important to the tribe. This may be the number of animals in a herd or the number of people in a

hostile tribe. Also needed are measures of size, Strength, distance and time however crudely formulated they may be. A certain primitive awareness of similarities of shapes must be present in effort to duplicate arrowheads and implements. It is also important to have some means of describing location involving both distance and direction. Thus, even in a primitive society, certain intuitive concepts which later developed into mathematics are necessary.

Even in the ancient time, people used mathematical concepts. It was, of course their social need that motivated them to develop the concept of counting for keeping a count of animal, for example, one figure per animal (sheep, goat etc.) could be turned under. Counting could also be maintained by making collections of pebbles or sticks by making scratches in the dirt or on a stone by cutting notches in a piece of wood by tying knots in a string. In this context Eves (1953 AD) states as. “The development of counting seems fair to argue that humans event in most primitive times had some number sense at least to the extent of recognizing more and less when some objects were added to or taken from a small group for studies have shown that some animals posses such a sense with the gradual evaluation of society. Simple counting becomes imperative. A tribe had to know how many numbers it had and how many enemies and a man found it is necessary to know of his flock of sheep was decreasing in size. Probably the earliest way or keeping in a count was by some simple tally method, implying the principle of one to one correspondence.”

Mathematics has been occupying a well established position in the school curriculum for a long period. Supporting this view. Traverse at. All write.

“Ever since the school of ancient Greeks over 2000 years ago mathematics has been a key subject in the curriculum. The four liberal arts consisting of arithmetic, Geometry, astronomy and music where basically mathematics studies.”

Number a schools were established after democracy (2009 B.S) In 1954 A.D. Nepal national Education planning commission (NNEPC) (whose advisor was Dr. H.B wood. An education specialist from university of Oregon USA) put forward a long discourse upon management teachers training and curriculum of education in 1960 A.D. Panchayati system was introduced and constituted “All Round National Education commission” (ARNCE), in 1962 A.D. It put forward the document to

“National Education council” (NEC). In 1971 A.D. NESP was executed. His majesty’s Government established curriculum development center, (CDC) to produce curriculum and handed over the publishing and distributing work to Janak Education Materials centre which is still continuing this work. NESP brought about structured changes with its introduction of new model in education system. Text books were developed, training to the teachers was provided syllabus for each level was set up and objectives were crystal clear. However the curriculum implementations plan 1981. A.D. improved the curriculum of 1971 A.D.

There were changes after the restoration of democracy in 1990 A.D. National Education commission (NEC) 1992 was established and referred to design new curriculum for school level. Curriculum was revised with the recommendation and suggestions of NEC and text books were prepared along with teacher’s Guide were developed for better teaching.

Use of Teachers’ Guide in Nepal

Teachers Guide one of the significant teaching materials is a book designed in order to help teachers in their classroom teaching to run the class effectively. It is prepared to facilitate the teachers to apply the techniques and use other related materials that help to develop learner's competence. Teacher’s Guide is thought to be vital in bringing changes in the traditional ways of teaching as it guides the teacher to explore and apply new techniques in practice.

The Education system, NESP was implemented in 1971, which brought the concept of developing and using teacher’s guide along with the changes that were going to be made in almost all the aspects (Such as curricula, textbooks, teaching methods etc) of the existing education system. The education report of NESP 1971, has clearly stated that teacher’s guide has to be compulsorily prepared along with book and work book for the students. (Sharma, 2003:266)

It shows that NESP has strongly recommended preparing and using Teacher’s Guides of all subjects in school level, thought out Nepal. According to one of the senior curriculum development officers of CDC, MrShambhu Prasad Dahal, The Teachers Guides were produce in the form of calendar in 1971, as soon as this plan

was implemented but production distribution and use of Teachers' Guides could not be effective as intended in NESP.

Review and reappraisal at every stage of history is considered as an integral part of Education system. The contribution of different commissions should be regarded significant in this context. The next commission, i.e . NEC submitted its report in 1992 which has also paid great emphasis on the development and effective use of TEACHER'S GUIDES to achieves the desired aim of school level education. As the primary education is the foundation of the higher education, to make it accessible and affordable to all the people of Nepal.

Government of Nepal has implemented various educational projects. Of them, Basic Primary Education project (BPEP) is one and vital which was implemented in 1992 (2049B.S.) with the objectives of improving the quality of primary education and making primary education accessible for the children living at each nook and corner the country. In the same year i.e. in 1992 BPEP in co-ordination with one of the important sections of CDC, primary curriculum and text book development unit (PCTDU) produced teacher's guides of all subjects for grade one distributed freely through District Education offices throughout the country as new curriculum of grade one was recently implemented and textbooks prepared in accordance with new curriculum were started to be used for the first time. New curricula was implemented phase wise to grade 2,3, 4, and 5. In the academic years 1992/93 (2050/51), 1993/94 (2051/52) , 1994/95 (5052/53) , and 1995/96 (2053/54) respectively. The teacher's guides for each grade were developed and distributed along with the implementation of new curriculum.

Similarly, the new curricula of lower secondary classes were implemented from the academic year 1994/95 (2052/53) in grade 6 and phase wise in other higher classes. But Teachers' guides of lower secondary level were prepared from the academic year 2061.

The new curriculum of secondary level (9 and 10) was implemented in the academic years 1998/99 (2055/56) and 1999/2000 (2056/57) respectively and the Teachers' guide of all subjects have been produced and distributed along the distribution of the text books thought the country.

At present, the publication and distribution responsibility for Teachers' guide of primarily classes has been given to SajhaPrakasan, it publishes as per the demand of the teacher/schools and sells through its distribution agencies. Teachers' guides of lower secondary and secondary classes are published by Curriculum Development Center Sanothimi and sold through many other distributors as it send Teachers' guides to the market after publication.

Introduction of Primary Level Mathematics Teachers' Guide and Its Importance

“The text books of school level's are revised with the change of time as suggested by the National Education Commission 2049 and Higher level National Education Commission 2055. I t is hoped that the education should produce the deep feelings inside the students heart and express their feelings and emotions according to the norms of multi party democracy system so that skilled, good behaved and dutiful citizens could be produced for the development of nation.

The CDC has prepared teachers' guide hoping that it could help teachers to teach the text books effectively and make the students active for doing activities. In this guide, the techniques and methods to be applied while teaching the contents given in curriculum and textbooks are tried to include clearly as far as possible. The descriptive and lecture methods are discouraged and students untried and activity oriented techniques are applied although this guide is to help the teachers for teaching contents included in the text books, the prescribed activities and teaching may not be enough. For the remediation of this, it is hoped that the teacher would take these activities and techniques as models and involve their students in more and more activities so that the students could acquire the mathematical knowledge effectively and practically.

Teachers' Guide explicitly directs the teachers, who are applying so called traditional methods in teaching so far, about effective application of new textbook. It encourages them to use curriculum as solo base of teaching activities. The use of Teachers' Guide can be presented as below.

- To make instructional plan.
- To select teaching method.

- To onwards inclusive teaching.
- To select appropriate teaching aids.
- To do effective evaluation.
- To choose appropriate teaching activities

The CDC has prepared this guide hoping that it could help teachers to teach the textbooks effectively and make the students active for doing activities. In this guide, the techniques and methods to be applied while teaching the contents given in curriculum and textbooks are tried to include clearly as far as possible.

The Teachers' Guide in primary level of mathematics has the following objectives :

- To assist teachers to use the new textbook effectively and actively,
- To optimize students' learning
- To enhance teachers' subject matter confidence,
- To cater for teachers' needs for a variety of activities which require students' active involvement,
- To achieve the national goals of the curriculum..

That's why, it is very important for the teacher to have knowledge and information on how to manage their teaching and learning in effective way, teachers guide provides lots of information on this matter.

Teachers' Guide, a guiding manual, designed in a very simple language, is a very practical document. It helps teachers and encourages students for active participation in classroom activities. Simplicity in instructional language, step wise instructions for teachers in each exercises, tape script, model lesson plan, glossary in it's appendix part, indication of linkage between the Textbook and the curriculum, elaboration of subject matter, chunks of unit in different lesson, different approaches, methods and techniques used for the presentation of the subject matter etc. are it's highly admirable aspects. Similarly, the other research works reviewed has provided insights and information about the teachers guide

Statement of the Problem

A problem might be defined as the issue that exists in the literature, theory or practice that leads to a need for the study. Since the statement of problem is mentioned in any kind of research. So, I have tried to express the problems related to this study.

The problem of this study mainly concerned with the comparison on attitudes of Teacher's towards Teachers' Guide of mathematics in different Community and Institutions schools. So, the study was intends to answer the following research questions:

- i) Is the existing Teachers' Guide of mathematics appropriate for primary level?
- ii) What is the teachers' attitude towards the implementation of teachers guide at primary level?
- iii) Does the community school teachers' attitude differ from the institutional school teacher about Teachers' Guide?

On the basis of above mentioned problems/questions, I am quite interested in carrying out a research on this topic entitled Teachers Attitude towards Using Teachers' Guide at Primary Level. It explores the ground reality of attitude for teachers towards primary education of Nepal in general.

Significance of the Study

Mathematics is considered as an essential component of school and higher education. This study helps to investigate the Teachers' attitude about Teachers' Guide of mathematics in primary level. This study will provide the appropriate information about the difficulties of students in learning mathematics. This study also opens the door for further research in the field of improving the curriculum of primary school mathematics. So the research will be more relevant and contextual. Most of the educated parents in Nepal wish that their children should study mathematics. But the failure rate in mathematics is higher than other subjects in school level as well as campus level. It is great loss of money, time and effort.

What are the causes of being failure in mathematics? Is this subject harder than the other subjects? It is defect of curriculum or textbook? These are the researchable questions in mathematics. After the deep thinking and homework CDC, prepared new curriculum text books of mathematics in existing situation of new trend of the world.

CDC is also preparing teachers' Guide in different subjects. The purpose of this work was to given the guide line to the teachers. The researcher experts that the study about teachers' guide is necessary because CDC has put the importance of teachers' guide in preface as :

The CDC has prepared this guide hoping that it could help teachers to teach the text books effectively and made the students active, for doing activities. In this guide the techniques and materials to be applied while teaching the contents given in curriculum and text books are tried to include clearly as far as possible. The descriptive and lecture methods are discouraged and students centered and activity oriented techniques are applied. Although this guide is to help the teachers for teaching contents included in the text books the prescribed activities and teaching techniques may not be enough. For the remediation of this it is hoped that the teacher would take these activities and techniques as models and involve their students in more and more activities. So that the students could acquire the mathematical knowledge effectively and practically.

Still there may be some weakness and shortcomings in this guide. Although it is prepared to help teachers for the successful implementation of the textbook. The CDC experts the creative suggestions from the experts teachers, students educators and guardians for the improvement of this teachers 'guide. In this context, this study has the following signification.

- It would help to identify some shortcomings of Teachers' Guide in mathematics of primary level.
- It would help to assist teachers to use the Teachers' Guide effectively.
- It would provide valuable information to the text book writers, evaluators and planners to bring improvements of Teachers' geode in further revision.

Objectives of the Study

The study has the following objectives:

- i) To find out the attitudes of primary level mathematics Teachers' towards Teachers' guide.
- ii) To compare the attitude of community school and institutional school teachers' about teacher's guide.

Statement of the Hypothesis

Research hypothesis

The research hypotheses formulated for this study were as follows.

- There is positive attitude primary level mathematics towards Teacher' guide.

Statistical Hypothesis

The following sets of statistical hypothesis were considered to verify the research hypothesis.

1. Null hypothesis H_0 : $\mu_1 = \mu_2$ There is no significance different between the attitude of mathematics teachers towards teachers guide.
2. Alternative hypothesis H_1 : $\mu_1 \neq \mu_2$ towards teachers guide. where μ_1 & μ_2 are the parametric mean attitude scores of community and institution school teachers.

Delimitations of the Study

The study was delimited in the following ways:

- This study was limited only to the Jajarkot district.
- This study was limited to the primary level mathematics teacher of community and institutional school in Jajarkot district.
- This study was concerned only with the attitudes of mathematics Teachers' toward teachers' Guide in primary level.

Operational Definition of the Key Terms

Attitude: According to the dictionary of education " A state of mental and emotional readiness to react the situations, persons, or things in manner in harmony with a habitual pattern of response previously conditioned to associate with a these stimuli " But this thesis attitude includes the views and responses of mathematics teachers teaching in primary level, towards physical aspect/pedagogical aspect (helpful aspect) and effectiveness of teacher's guide

Community School: The School conducted by the community and institutional free education is known as community school.

Institutional School: The school run with the students without any financial support from the government.

Primary Level: Those school's which contains grade I, II, III, IV and V.

Teacher: A person who teaches compulsory mathematics at primary level in Community or institutional schools.

Teacher's Guide: The teachers guide is a book for compulsory mathematics which is designed and prepared by CDC to help mathematics teachers teaching in Primary level.

Chapter – II

REVIEW OF RELATED LITERATURES

This part of the study consists of review of the theoretical literature, review of the empirical literature, implication of the review for the study and conceptual framework for the study.

Empirical Literatures

The chapter is devoted to review of literatures related to this study. This would examine that what is needed to be done on the basis of what has already been done.

All progresses are born of inquiry. Doubt is often better than over confidence, for it leads to inquiry, and inquiry leads to invention." Nowadays, research has made every impossible facts possible in this tentative world. Much research has been conducted in different aspects of mathematics. Some of the studies related to this research are reviewed here.

In order get a better understanding of the subject of one's study. It is essential and helpful to survey the literature and studies, relevant and related to it. The related studies provides the researcher in making his problem more realistic precise, researchable and meaningful. Having these advantages in mind the researcher reviewed the relevant literature in the field of attitudes towards mathematics and other school subjects and other related fields.

During the last three decades, there were carried many studies about the attitudes of teaching profession, Studies on the attitudes of students and teachers towards mathematics and the students about the achievement in mathematics in different classes of school level.

The development of a field oriented sequence in the "Primary Teacher Training Programmed: An Action Research Project" has thrown light in the importance of the teachers positive attitude in the following words, "Positive attitude and commitment to teaching profession are seen as essential to changing classroom behavior."In the topic "A longitudinal study in mathematics Attitude" An Attonen,

Ralph (1969) found that “a significant positive correlation was found between the attitudes of students tested in grade 5 and 6 and retested in grades 11 and 12. A significant correlation was found between attitudes and achievement.”

From a through review of research an attitudes towards mathematics and factors affecting those attitudes Lewis R. (1970) found that “attitudes can be traced to childhood with evidence that they are formed as early as the third grade. The result of a number of studies indicate that attitude towards mathematics becomes increasing negative as the students go through school.”

Pathak (1986) in a study entitled “The problems face by the teachers in Kathmandu district in implementation of mathematics curriculum for lower secondary schools”, Concluded that most of the teachers of Kathmandu district have not been facing problems in the selection and use instructional materials but they are facing problems in selecting proper evaluation device.”

Similar study made by Luitel (1997), found that students studying in both private and public schools had similar attitudes towards mathematics. The mean measure of attitudes of boys was significantly higher then that of girls.

Adhikari (1999) found that attitudes of teachers towards the integration of hard of hearing/deaf students in mathematics in general schools was positive.

Pandit (1999) has carried out a study on “A study of Attitude of secondary level students and teachers towards Geometry”. He found that positive attitudes of students and negative attitudes of teachers towards secondary school Geometry. Secondary level boys had better attitude then girls in Geometry.

Dhakal (2001) did a research on the topic “Appropriateness of the compulsory mathematics” textbook with the aims of study the appropriateness of mathematics textbook on the basis of its academic, physical and psychological aspects and to investigate the different problems face by the teachers if they existed in teaching the new textbooks. He concluded that the organization, presentation, examples, figures, graphs were found to be appropriate. He also concluded that teachers were undecided

whether it could help students participate in self-learning. He found that teachers felt difficulties to teach newly included topics without any training.

Lamichhane (2001) concluded in a study on “problems faced by the secondary level mathematics teachers in teaching mathematics” that there are myriad problems that cause teachers inefficient and unenthusiastic to execute their duties properly inside and outside the classrooms. Most of the problems showed their face because of indigenously of textbook and teachers’ guide, lack of instructional materials, irrelevancy of teacher’s training, lack of supervisor help, lack of physical facilities etc. Preparedness and the level of motivation to learn mathematics are poor on the part of the students.

Mitra (2001) did a study on teaching materials and subject wise classroom observation and conclude that trained and experienced teacher integrate students ideas more and the students and teachers had inadequate interaction in classroom environment. The project suggests a research proposal to collect feedback about curriculum and Teacher’s Guide.

Sharma (2001) did a research on " A study on the attitude of teachers' Guide of mathematics for grade X". He conclude that the teachers of Kathmandu district teaching in grade x have negative attitude towards Teachers' Guide of compulsory mathematics of grade x and no difference was found between the public and private schools teachers towards Teachers' Guide.

Bastola (2002, p.71) Teachers’ Guide is the systematic presentation of pedagogical related instructions based on National curriculum which aims to provide explicit instructions to the teachers as self learning materials. To define Teachers’ Guide.

Sharma (2004) did his research entitled" A study on effectiveness of mathematics teacher's guide in secondary level". It can be concluded that the teacher's guide designed in simple language, helps teacher's for planning the lesson and makes students creative. So teacher's guide is very effective and useful the researcher found most of the teachers' of positive

Pokhrel (2005) did his research entitled "Teacher's attitude towards problem solving approach in mathematics classroom" with the objective to find out the attitude of public and private school teachers towards problem solving approach in school mathematics. The research took 24 teacher for sample by using random sampling method and survey design was adopted. Data analysis was done statistically by using χ^2 -test and t-test and following conclusion were made:

- All the mathematics teacher had positive attitude towards problem solving approach in school mathematics.
- Public school teacher and private school teachers had the same positive attitude towards problem solving approach in school mathematic class.

Khatiwada, (2007) "Attitude of Lower Secondary Mathematics Teachers towards Teachers' Guide." It can be concluded that the teacher's guide, a guiding manual, designed in a very simple language, is a very practical and helps teachers and encourage students for active participation in classroom activities at public and privet schools teacher attitude towards positively.

Bhattarai (2007) did a research on " A study on factors affecting the use of instructional materials at primary level" with the objective to :

- Identify the factor that affects the use of instructional materials in teaching mathematics at primary level by using "Survey design" with descriptive approach. The researcher collected the data through questionnaire form to visit each teacher of each sample school. The researcher took 20 teacher of 20 school for sample by using purposive sampling. Data analysis was done statistically by using multiple regression and correlation coefficient and following conclusion were made M
- The availability of instructional materials in the school was not satisfactory.
- Teacher training space available per student availability of instructional materials and students teacher ratio and strongly positive effect on the use of instructional materials.

Joshi, (2008), "Attitude of Teachers' Towards Teachers' Guide at Lower Secondary Level". On the basic of the finding some very significant conclusions can

be drawn for the teachers' guide. The conclusions are derived in this section as negative attitude of teachers about tracers' guide in the over all study. So the teachers' Guide should be improved although teachers agree about the merits of teachers' guide

Theoretical Literatures

This sub-chapter deals with different theoretical perspectives related to the factors that directly or indirectly associated with the teachers guide and the valuable teaching aids. Teacher's guides are curriculum instruments and their contents are primarily concerned with the provisioning of curriculum in the five dimensions of curriculum components : (a) a framework of assumptions of about the learner and society, (b) aims and objectives of instructions: (c) contents or subject matter with its selection, that is, scope (amount and type of content to be covered) and sequences (the order and hierarchy of content relationships): (d) modes of transaction (i.e. teaching strategies and the setting of learning environment); and (e) evaluation and testing. Not all guides give attention to these five components.

Teacher's guides advice teachers on alternative representations to make content more accessible to students. Where the contents are related more to direct experience, guides suggest the organization of learning environment for more direct experimental learning. In theory the guides focus on either development of subject matter learning or growth of subject matter in individual mind. In the later construction there is no separation between subject matter content and subject matter as a manifestation and individual experience. Where the guide emphasized the subject content the construction is focused more on prescribing assignments, testing and retouching than establishing an open- ended learning environment.

Huan (1961) states the attitudes of students and teachers understanding of mathematics as: "The large number of teachers who desires or fear mathematics has become a factor in children's attitudes towards the subject. The effect of teacher's attitudes are wide-spread. Like all other attitudes dislike of mathematics is readily communicated to children either directly or unconsciously."

As NESP was implemented in 1971 the concept of developing and using Teachers' Guide was introduced with the changes that were going to be made in

almost all the aspects of existing education system. The education report of it has clearly stated that the Teacher's Guide has to be compulsory prepared along with Textbook and Work book for the students (Sharma, 2003, p.266).

Ernest (1989) refers to the teacher's attitude to the teaching of mathematics, these include likings, enjoyment and enthusiast for the teaching of mathematics and confidence in the teachers own mathematics teaching ability. Influencing teachers' beliefs, therefore are essential to changing teachers' classroom practices.

Activity -Based Learning is an umbrella term that refers to several models at instruction that focuses the responsibility of learning on the learners (Wikipedia, 2008). Activity-Based Learning is a procedure where students actively engage in the lesson rather than just sitting, listening and absorbing the lesson. It is a method of teaching that enables students to be involved in reading, writing, discussion, practical activities, analysis and evaluation of the topic under discussion. The models of Activity- Based Learning suggest that all learning activities involve some kind of learners' experiences which emphasizes observing and doing (Kathleen, 1996). These also promote students involvement and actively engaging with material to enhance the recall of information according to Bruner in Azuka (2013b). Learning becomes more perfect when theoretical knowledge is supplemented by learning all possible life supporting skills which can only be enhanced through Activity- Based Learning method in teaching mathematics. Learning can be termed meaningful in the life of the learners when the learned or acquired knowledge, facts, ideas, concepts, skill, behaviours and attitudes are transferred to thinking and action of the learners (Matthew, 2009).

To effectively carryout activity- based learning in mathematics classrooms, the teachers are advised to adhere strictly to the following: learning experiences should be arranged to create motivation and interest in the students to learn mathematics concept by doing; teacher should move away from telling or lecturing method and embrace the use of activity- based learning; teacher should make sure that the learning experiences are arranged according to the need of the learners and make them search and gather more information in the teaching and learning of mathematics; and learning experiences should become challenging to the students and stimulate them for more self activities. Others are that learning experiences should energize the

improvement of their thinking abilities, decision- making abilities, intellectual resourcefulness and discipline in life; learning experiences should be inspiring, able to relate them to life situations and bring about desirable change in behaviour thus leading to the development of personality (Mathew, 2009). The reasons while teachers are advised to embrace activity-based learning is that students understand mathematics concepts better when they are engaged in learning experiences which help to enhance higher retention in the learners and provide opportunities for them to think for themselves.

However, for any innovation to work, attitude of the practitioners is very important. Attitude is defined as a complex mental state involving beliefs and feelings. Anastasi in Dagnev (2011) defined attitude as tendency to react in a certain way towards a designed class of stimuli. Attitude is positively related to achievement in any endeavour. For instance, attitude is fundamental to the dynamics of behaviour and determines how far a student learns (Odili, 2006). Attitude has to do with the way one perceives, the opinion one holds as well as what one beliefs about a thing, people, activities, institutions, policies, administrations and phenomena in general. Someone's attitudes about an object, event, or group of people can also determine his achievement (Harbor-peters, 2005). Attitude of teachers towards activity-based learning is an issue in education of students because if the teacher is not positively disposed to activity-based learning, he/she would not achieve the purpose and its objectives of the lesson in school. People's favourable attitudes towards their profession have a positive effect on their performance. This is more so for the profession of teaching. Dagnev (2011) highlighted some of the factors affecting the attitude of teachers towards the profession include inadequate funding of schools, lack of parent and community support and insufficient remuneration, and experience of teachers. Gender is another factor and Dodeen et .al in Dagnev reported that female teachers had more positive attitude in the teaching profession than male teachers.

Many researchers concluded that attitude of teachers influence heavily on their learners, teaching output and their success. Gupta in Dagnev(2011) concluded that interest in teaching and attitude towards teaching were factors associated with teaching success. In a series of studies pioneered by Barr and reported by Rosker and cited in Dagnev (2011) there appeared a general agreement that attitude of teachers

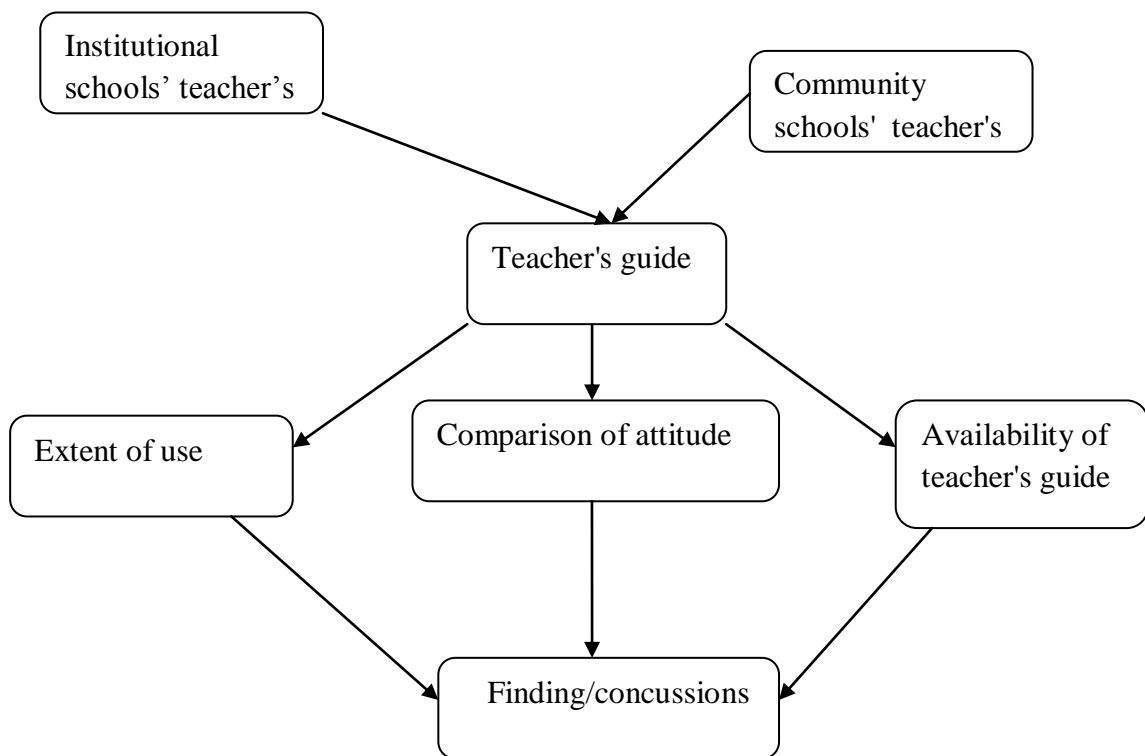
towards teaching was significantly correlated with teaching success. In general, it may be concluded that there is an indication that teacher's attitude have positive relation with success in teaching. Bhatia and Bhatia in Dagneu (2011) identified that many factors and situation influence the development of attitude, such as the type of schooling that the individual has, the personality of the individual, the parental attitude, the attitude of friends, teachers, and siblings.

Dagneu (2011) studied the attitude of teachers towards the use of Activity learning Methods at Bahir Dar University. He found out that majority of the teachers involved in the study had good attitude towards the significance of active learning method as it enables English students to participate actively in English classes, create desirable attitudes towards communicative English, engage the students, and integrate their learning experiences. He also found out that majority of the teachers agreed that active learning enables students to experience learning in collaborative and supportive environment, resolve problems using past experience, motivated by providing real life problems, and helps classroom interaction. But the teachers disagreed that that active learning enables students to learn sufficient content in English language.

Conceptual Framework of the Study

This study was related to the Teachers' Attitude towards Using Teachers' Guide. By the help of above related literature has been already described and theoretical perspective; the following conceptual framework was developed by the researcher.

Figure: Teachers' Attitude Towards Using Teachers' Guide at Primary Level in Jajarkot District



The researcher has separated the conceptual framework into different section for the convenience of the study. At first, the researcher has studied attitude of community school teachers and institutional school teacher's attitude towards the use of teachers guide separately and comparative study later on. It also tries to explore the availability of guide in the research area and extend of use of teachers' guide.

Above the given framework, teacher's guide is not only practiced in community school but also in institutional school too. While teaching mathematics in the classroom teacher's guide has been a material to interconnect the ideas of the textbook. The researcher has studied the use of teacher's guide in institutional school

and community school in order to externalize the reality of Jajarkot district in particular and all the Nepalese school in general.

Similarly, the second figure, "Comparison of Attitude" has explored the attitude of teachers towards teacher guide in one hand and the availability of teacher's guide in the other. It is controversial because, most of the teacher's from institutional school do not agree to use teacher's guide. Among them, some of them are agreed. Teachers from the community school agreed to use teacher's guide while teaching.

Chapter – III

METHODS AND PROCEDURES

This chapter presents the logical ways of the study .The research design is survey, analytic, descriptive and comparative in nature. So, this study is essentially an enumeration of the opinions, problems and suggestion of primary school mathematics teachers about Teachers' Guide. The chapter describes in details about the total population, sample, tools, procedure of data collection, scoring procedure and the statistical techniques used in this study.

Design of the Study

The research design is survey, analytical and comparative in nature. An attempt was adopted to survey, analysis, and compares the attitude of the teachers towards the teachers' guide. Thus, it is a survey, analytical and comparative study conducted by the researcher. It is a survey research about teachers' attitude towards teachers' guide. This is quantitative in nature.

Population of the Study

The population of the study consists of all the community and institutional primary school teachers who were teaching mathematics in academic year 2072 in Jajarkot district. .

Sample of the Study

Random sampling method was adopted for selecting the sample of the study from Jajarkot district. According to the record of DEO, there were 278 community schools and 15 institutional school's in Jajarkot district. The researcher selected15 institutional schools as a sample and 15 community schools and one mathematics teachers from each school

Tools for Data Collection

Questionnaire and Structure interview were used for the collection of data in this research. The Questionnaire that consists of 30 statements. Among them 15

statements were negative (i.e. statements in against of teacher's Guide) and 15 statements were positive (i.e. statements in favor of teachers' Guide) was developed under the guidance of supervisor.

The attitude Five-points Likert-type scale was developed for the convenience of the respondents. Against each statements, there are five options labeled as strongly agree (SA), agree (A), undecided (U), disagree (DA), and strongly disagree (SDA) which were given for different weight age. The research questionnaire and interview schedule were presented in Appendix B and Appendix C respectively.

Data Collection Procedure

The researcher used the following procedure to collect the data. For data collection, the standardized Questionnaire and structured interview was used. These questionnaires were distributed to the primary schools mathematics teacher of sampled schools and take permission with District Education Office, Jajarkot to render any help needed to the researcher from the school administration. After explaining the purpose of the visit, the researcher, in his presence, requested the teachers of the sampled schools to express their opinion by filling out the Questionnaire. The data was achieved by administrating the instrument among the sampled teachers. The researchers were made the statements clear when they found any difficulty. Their views were collected by asking to put a tick mark () in any column of the options (Strongly agree, agree, undecided, disagree and strongly disagree) for each statement according to their willing.

Then the data were tabulated by using the following:

Options	Rating for positive statement	Rating for Negative statement
Strongly agree (SA)	5	1
Agree (A)	4	2
Undecided (U)	3	3
Disagree (DA)	2	4
Strongly disagree	1	5

Analysis and Interpretation Procedure of Data

The collected data were tabulated and analyzed by applying statistical test χ^2 (chi-square) and simple percentage. The statistical tool of t-test was used to find out significant difference between mean scores attitude of community schools and institutional schools at primary level.

The collected data were analyzed by using following statistical procedures.

- a) χ^2 -test was applied to find the attitude of teachers for the positive and negative statements.

The computational formula used for calculation of χ^2 -test was

$$\chi^2 = \frac{\sum (f_0 - f_e)^2}{f_e}$$

Where f_0 = observed frequency, f_e = expected frequency.

- b) Similarly, the collected data was analyzed qualitatively by interpreting the recorded interview. the interpretation of the qualitative views i.e. attitude of primary level mathematics teachers towards teachers' guide was written in paragraph in explanatory way.

Validation of Tools

The questionnaires were developed along with the attitude scale of H.F. Bell under the guidance of supervisor. The tools were validated according to our context with the help of supervisor and subject experts. To check the gross defects in language, suitability of the items, appropriation of the statement, complexity, coverage of content etc. of the tools, the researcher consulted the related experts and lastly with suggestion of supervisor, some modification were made and finalized.

Chapter – IV

ANALYSIS AND INTERPRETATION OF DATA

After collecting the data as described in chapter III, The collected data were tabulated and analyzed for the study of attainment of objectives and verification of the hypothesis as stated in chapter I. This chapter presents the results of analysis after the interpretation of the data. The analysis of the study was carried out under the following major headings which correspond to the objectives of the study.

1. Mathematics teacher's attitudes towards teacher's guide of primary level.
2. Comparison of community and institutional schools teacher's attitudes towards teacher's guide.

Teachers were asked to response to 30 questionnaires to assess their opinion towards the teacher's guide of primary level. Appendix A presents the χ^2 -value at 0.05 level of significant and the conclusion of each item.

From appendix A most of the item found significant at 0.05 level, which showed clear indication that the teachers have positive attitudes towards teacher's guide.

Teachers Questionnaire Towards Teacher's Guide of Primary Level

Teachers' were asked to response to 30 questionnaires to assess their opinion towards the Teachers' Guide of Primary Level. Appendix A presents the χ^2 - value at 0.05 level of significant and the conclusion of each item.

From Appendix-A, most of the item found significant at 0.05 level, which showed clear indication that the teachers have the positive attitudes towards the Teachers' Guide.

In response to item No. 1 "The design and finishing of mathematics teacher's guide of primary level mathematics is good. "The respondents almost unanimously found that the Teachers' Guide is helpful for the teachers and need the aims of mathematics curriculum 70% of teachers agreed and only 30% of teachers disagreed.

In the case of IInd statement, "The teachers' guide is Costly", 53.3% of the teachers stated that, The teachers' guide is more costly. They cannot afford the cost from their side. They also suggest the school administration to help them buying the teachers guide for the improvement of mathematical education at primary level.

The third statement was about the helpfulness of Teacher's guide to fulfill the objectives of mathematics at primary level. The teacher's attitude towards this question is very positive. More than 76% (76.7) respondents are positive. They are in favour of teachers' guide. The fourth statement named "The real problems faced by mathematics teachers while teaching mathematics are not identified by teachers guide. Regarding the responses of this item, 83.3% respondents responded that this is significant. The fifth item has tried to find out the teachers' guide becomes the real guide which helps the teachers in their process of teaching mathematics at primary level. More than half perfect (53.4%) are agreed to this item. This resulted that the teacher's guide has more significant role for the mathematics teachers. The sixth item has tried to know the teacher's attitude toward the guide whether it is just a guide of a textbook or not. Nearly about one third (30.3) respondents are agreed that teachers guide is just a guide of a text while 69.7% respondents are disagreed.

The next question, "The tactful solutions for the difficult problems of the text book have not been given in teacher's guide", which has the aim to fulfill the needs of the teachers or not. The teachers have expected that the guide is helping them by providing solution of the difficult questions. At the responses of this question, 83.4% teachers are agreed that It helps them by solving difficult problems. SO, this question becomes more significant for this study.

The 8th questions tried to explore the attitude of teachers towards guide. The question, "The additional exercise made the guide standard, "83.4% of respondents stated that the teachers guide provide the additional exercise which help the teachers to solve the next problems.

Similarly, to answer the 9th statement, "It is necessary for the teacher's to make daily lesson plan because the objectives and instruction materials are mentioned on it". 19 respondents out of 30 answered that it is necessary for the teachers to prepare

daily lesson plant which is more helpful to them what to teach in the claps and helpful to meet the annual plan of schools. So, this question is more significant for the study.

Statement no 10 stated, "It would be better for both institutional and community schools mathematics teachers", was found statistically significant at 0.05 level which was the common opinion of the teachers. Similarly, the next statement, "It becomes a real guide specially for the untrained teachers", was focus on the significant of guide to the untrained teachers. For the response of this question, more than three fourth (76.6%) respondents have the common answers that follow the agreement of them in this item.

The answer to the statement no. 12 "The guide would be more standard if new modern skill and techniques for effective teaching learning are included rather than solving the problem", was found statistically significant. So, it becomes clear that the teacher's guide provides the new technique and tools for the teachers which are emerged in the teaching learning process.

When we keep one attention towards the 13th statement, "It is food aspects that there is solution of some problems of text book. It was found that 76.6% respondents replied that they are agreed with this statement. So, it has become significant. Two third (67%) respondents are disagreed with the 14th statement which stated, "It is not always accompanied all the mathematics teachers because of its significant guidance". This is the negative statement; It becomes more significant statement for this study.

The essence of the 15th statement is whether availability of teacher's guide easily in the market or not tow fifth (40%) respondents replied that it is easily available whereas majority (60%) responded that it has become more difficult for them to get the teachers guide in the local market. SO, they are unable to use guide due to the unavailability. Even though, they have good knowledge about how to use the teachers' guide and it's significant in the classroom.

The 16th statement has tried to relate the importance of guide with the curriculum of mathematics. It said, "Allocated time and weight age of every lesson are fixed, that helps the teachers to finish the cause on time". By responding this

statement 86.6 are agreed with the statement. They responded that it helped them to finish the cause on time.

"In this guide, there is no error in printing and language "was the 17th statement which was presented with the teachers' to know their views. Majority (70%) of the respondents replied that there is no any mistake in the printing and language in guide book.

The 18th statement has the negative meaning. The statement, "The language of the guide is not simple and easy to understand." 6 respondents out of 30 are agree with the statement. It resulted that the language used in the teachers guide is common and understandable by all teachers. On the respect of the statement, "The figures are appropriate and useful for the teachers', It was found that, with χ^2 value 17.01, the statement was highly significant. 63.4% of the respondents showed positive attitude towards the statement. 5 out of 30 respondents are undecided with this statement. This showed that the statement is more significant in this study.

Statement no, 20, "The topics in teachers' guide were analyzed according to the text book, "with χ^2 value 29.34 ;is significant statement at 0.05 level. Half of the respondents (50%) are agreed with this statement. Similarly, the next statement, "The weight age of marks of every topic for examination should be given in it" with the χ^2 value 40.34 is highest significant at 0.05 level only one out of 30 respondents undecided on this statement whereas rest of the respondents are agreed.

All of the respondents are agreed with the statement, "Every mathematics words are given in both English as well as Nepali language that makes the teacher easy to understand. It shows that this is the more significant statement among all the statement.

The 23rd statement is about arrangement of the guide with simple to complex. The statement, "The objectives of each topic were arranged on the basis of their level of difficulty (simple to complex), with χ^2 value 30.68. was high significant.

The 24th statement, "The examples given in teachers guide are related to the daily life activities and experiences of students" with χ^2 value 12.34 which showed it

has less significant. Even though, 20 out of 30 respondents are agreed with the statement so, it become significant.

The 25th statement, "The examples, formulas, and direction given to teach each unit or topic are not sufficient", was found statistically significant. So, it has clear that the teachers guide is insufficient to guide the teachers at primary level. Similarly, the next statement, "Teaching materials given in teacher's guide are not suitable for the school of Nepal", with χ^2 value 12.34 was less significant. Only 20% respondents was found that they agreed with this statement.

On the response of the statement, "It would be more helpful for the teachers to make students more practicable if the model question sets were included in it.", the respondents were agreed. 76.6% respondents replied that It makes the mutual relation to the teacher and students. The 28th statement, "The ambiguity for the teachers about what to do in classroom have been removed by the teaching learning activities given in it" has more significant. 29 out of 30 respondents are agreed whereas only one respondent was disagree with this statement.

The second last statement, "Appropriate methods are not given to prepare teaching materials" with χ^2 value 33.68 was more significant. 43.4% respondent provided in the guide.

Finally, the last statement, "Ample suggestion and hints are given to use the text book in teachers guide was significant statement. 56.6% respondents are agreed with the statement.

From the above mentioned description, the present researcher has reached in the conclusion that the Attitude of the primary level mathematics teachers towards teachers' guide is more positive. Ever though there are more obstacle they face lack of availability, lack of content etc are the major obstacle they face. Finally, Most of the teachers' have positive Attitude towards the teacher's guide.

Comparison of Community and Institutional Schools Teacher's Attitudes Towards Teacher's Guide

The second objective of the study was to compare the opinions of community schools teachers and institutional schools teachers on guide of primary level. in order to achieve this objective, the following hypothesis was formulated.

There is no significance difference in the opinion of teachers of communality schools and institutional schools on teacher's guide of primary level.

To verify this hypothesis, the attitude scores of community schools and institutional school teachers opinion is given in Appendix B respectively.

The mean opinion score of community school teachers and institutional school teachers are compared by t-test. The result is shown in table 2.

Table No. 1

Attitude Scores Obtained by Community Schools Teachers and Institutional Schools' Teachers

Statement	Community schools teachers						Institutional schools teachers					
	SA	A	U	DA	SD A	Total scores	SA	A	U	DA	SD A	Total scores
1	4	8	0	2	1	57	1	8	0	6	0	49
2	2	6	1	5	1	48	1	7	2	5	0	49
3	3	7	0	4	1	52	3	10	0	2	0	59
4	6	9	0	1	0	66	6	4	0	5	0	56
5	1	7	1	3	3	45	1	7	2	5	0	49
6	2	3	0	6	4	38	1	3	0	10	1	38
7	5	8	0	2	0	61	7	5	2	1	0	63
8	3	10	2	0	0	59	2	10	0	3	0	56
9	1	5	0	6	3	40	3	2	0	10	0	43
10	10	2	0	1	2	62	6	5	0	3	1	57
11	8	4	0	0	3	59	8	3	0	4	0	60

12	1	4	0	5	5	36	1	3	4	7	0	43
13	7	5	0	0	3	58	9	2	0	4	0	61
14	0	1	0	10	4	28	0	1	0	10	4	28
15	1	1	3	10	0	38	0	10	0	1	4	36
16	5	10	0	0	2	67	10	1	0	4	0	62
17	4	3	1	5	2	47	3	11	0	1	0	62
18	0	2	2	3	8	28	0	4	3	4	4	37
19	0	10	5	0	0	55	5	4	0	6	0	53
20	0	5	1	9	0	41	0	10	0	3	3	47
21	8	6	1	0	0	67	7	8	0	0	0	67
22	7	8	0	0	0	67	10	5	0	0	0	70
23	1	7	0	7	0	47	7	0	1	10	0	43
24	3	6	0	6	0	51	5	6	3	0	1	59
25	0	2	1	12	0	35	0	3	0	4	8	28
26	0	2	3	4	6	31	0	4	4	1	6	36
27	9	4	0	2	0	62	7	3	3	1	1	52
28	8	6	0	1	0	66	11	4	0	0	0	71
29	0	8	0	6	1	45	2	3	0	10	0	42
30	4	3	0	3	5	43	6	4	0	5	0	56
						$\sum x_1 = 1502$						$\sum x_2 = 1539$
						$\bar{x}_1 = 50.06$						$\bar{x}_2 = 51.3$
						$S_1 = 12.28$						$S_2 = 11.64$

The mean attitude scores of Community and institutional schools teachers towards teacher's guide are compared with the help of t-test. The result of the analysis is presented in the following table.

Table No. 2

**Comparison of Community and Institutional Schools Teachers Attitude Towards
Teachers' Guide**

Compared Group	Sample size (n)	sample mean (x)	Standard deviation (S)	t-value
Community school teachers	$n_1 = 15$	$\bar{x}_1 = 50.06$	$S_1 = 12.28$	-0.023
Institutional school teachers	$n_2 = 15$	$\bar{x}_2 = 51.3$	$S_2 = 11.64$	

From the table above the mean attitude of community school teachers and institutional school teachers are 50.06 and 51.3 with standard deviation of 12.28 and 11.64 respectively. The computed t-values was found 0.023 which is less than tabulated value at 0.05 level of significance.

Hence computed t- value is less than tabled value i.e. calculated t- value falls inside the acceptance region. So null Hypothesis H_0 is accepted and concluded that there is no significant difference between the attitude of community and instructional school teachers about teacher's guide.

Interpretation and Analysis of Qualitative Data

As the researches were collected qualitative information through interview for the research work. The researches, head interviewed to five teachers who are working at community schools as well as institutional schools. Among them there were two teachers from institutional schools and three teachers from community schools.

As the researches asked them some questions in course of data collection through an interview, I have found different views regarding mathematics teachers' guide of primary level that they are using. All the respondents of community schools views in the favor of the teachers' guide (i.e. they use teachers guide and they accept its significant merit). However, they views that there are some challenges in using it (i.e. unavailability due to geographical reason). However, they thought it should be

their part of teaching. In their view teachers Guide is facilitating in their teaching by assisting them in their methodology, material preparation, presentation of the subject matter, etc. They thought there are lots of benefits of the teacher's guide.

From the interview, the present research has drawn following conclusion;

1. All the teachers have positive attitude towards using of teaching guide. Even though half of the respondents used it due to the unavailability of guide in local market.
2. Half of the respondents (56%) replied that the teaching guide is more helpful for them in teaching process.
3. These teaching who found the teacher's guide they found it is more sample. Majesty of the respondent (76.6%) found that it is easy to understand and helpful for them to teach.

Similarly, institutional schools teachers also support to the benefits of teachers guide to the teachers as community schools teacher reports. However, they replied that the present teachers guide is not meeting the local needs of mathematics teaching. Moreover, when there is change of the course, there is no teachers' guide available in their school. However, they rely on old and out dated teachers' guide. They thought expressions given in teachers guide are clear lively and simple as well as arranged from simple to complex.

Institutional teachers used teachers guide lesser than Community School's teachers. Though they thought it is guide of textbook, it has compulsion to use. They didn't think that it should be compulsory. It should be used occasionally; they thought it didn't address local needs of the teachers.

In a nutshell, there is view that Teachers Guide is facilitating in teaching, it is related to textbook, helps to fulfill objectives of the curriculum. It directs teachers in teaching. However, they thought the relevant and appropriate methods should be included as time demand. Community schools teachers' view that it is compulsion to use but institution teachers agreed on its advantage to fulfill objectives of curriculum in time and thought it should be occasionally used.

Chapter – V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATION

Summary of Findings

The research studied about the attitude of teachers towards teacher's guide of mathematics for primary level. The object of this study was.

- To find out the attitudes of primary level mathematics teachers towards teachers guide.
- To compare the attitudes of community and institutional schools mathematics teacher's about teacher's guide.

The above objectives of study were of survey type. To obtain these objectives of the study the corresponding null hypothesis were formulated and subjected to the empirical verification. The population for the study consisted of all primary schools community as well as institutional Jajarkot district. Sample of teachers for the study was selected from 30 primary schools of Jajarkot district 15 from community and 15 from institutional. The selection process was purposive non random sampling with the equal number of teacher from community & institutional school method.

Questionnaire was developed as the tool for collecting data for the study. There were 30 statements with five options for the collection of data and end of the questionnaire, the suggestions for the better improvement of teachers guide were demanded. The researcher personally visited the selected schools mathematics teachers for data collection.

The attitude score was provided to the scale 5,4,3,2 and 1 for the options strongly agree, agree, undecided, and strongly disagree, respectively for the opinion of respondents on each statement.

The following statistical techniques were applied to verify the hypothesis of the study.

- χ^2 - test was used to compute the altitude of teachers for the equality of positive and negative statements.
- T- Test was used to test the significance difference between two groups.
- All tests were tested at 0.05 level of significance.

The researcher also the qualitative data from the formal and informal dissection with teacher. Then data were analysis and interpreted descriptively.

Findings of the Study

From the analysis and interpretation of data following we made.

1. The mathematics teachers teaching at primary level have positive attitude towards teacher's guide of compulsory mathematics.
2. There is some significant difference between the attitudes of community and institutional schools teachers towards teacher's guides.
3. Another part of the study was to collect the suggestions for the improvement of teacher guide. the suggestions provided by the majority of the teacher are also the important findings of the study which are as follows :
 - Volume should be increased by including simple, medium and difficult questions puzzle, questions model questions, answer sheet, sufficient pictures.
 - Hints for difficult questions of text book should be given in teachers guide.
 - Teachers guide should be centered on techniques rather than solving problems.
 - More than one method should include solving the problems.
 - It is not necessary to give complete solution for problems only hints are enough for the teachers.
 - CDC and other authorities should supervise in schools about the implementation of curriculum, text book and teachers guide.
 - Mark weight age of each topic should be fixed from the exam point of view.
 - It should work as trainer.
 - Teachers guide should not be hurriedly prepared without correction the errors and print mistakes.
 - The suggestions from experienced teachers who are teaching in school should be taken.

- Important terminology should be given in English and Nepali language.
- Deep and detailed knowledge should be given for each topic.
- Teachers guide must be in closed the exceptional children.
- Teachers guide should be identified the problems which are faced in classroom.
- Teachers guide should be dimmed deathly improved if it require

Conclusion of the Study

It can concluded that the teacher's guide, a guiding manual, designed in a very simple language, is very practical and helps teacher and encourages students for active participation in classroom activities. Simplicity in institutional language step-wise instruction for teachers in each exercise, modal lesson plan, elaboration of subject mettle suitable teaching materials wherever it becomes necessary ect. Are its highly appreciable. Become of aforementioned positive aspect, the teacher's guide is very useful and effective.

On the basis of the findings some very significant conclusions can be drown for the teachers guide. The conclusions are derived in this section as follows:

- a) There is positive attitude of teachers about teachers guide in the overall study. (i.e. So the teacher guide to be improved teachers agree about the merits of teachers guide) . The teachers guide should little be improved.
- b) There is between the attitudes of difference groups of teachers.
- c) The researcher found most of the teacher of Jajarkot district has positive attitudes towards the teacher's guide.
- d) Teacher's guide helps untrained teachers Torun the class effectively.
- e) The community school teacher's opinion is better than institutional school teachers towards the effectiveness of teachers guide in primary level.

Recommendations for Further Study

The conclusions of the study cannot be generalized to all over the country due to the limitations contained in the study. On the basis of the study the following recommendations have been made.

- It should also be studied for the teacher's guide of other level.
- It should be studied the teacher guide other subjects.
- The similar study should be done at other district wise, regional wise as well as national wise in order to establish the findings of the study.
- It would be better for the police maker's expert and other research for the implication of education at primary level.
- It would be helpful for the research who tries to research on the same issue.
- It would be affect then natural policy if take positively.

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Appendix - A

MATHEMATICS TEACHERS ATTITUDE TOWARDS TEACHERS GUIDE

S.N.	Statements	SA	A	U	DA	SDA	Total Score	Mean Value	χ^2 value	Conclusion	Agree %
1	The design and finishing of mathematics teacher's guide of primary level mathematics is good .	5	16	0	8	1	106	3.53	27.68	S	70
2	The teacher's guide is costly.	3	13	3	10	1	97	3.23	18.01	S	53.3
3	The teacher's guide helps to fulfill the objectives of mathematics curriculum.	6	17	0	6	1	111	3.7	30.34	S	76.7
4	The real problems faced by mathematics teacher while teaching mathematics are not identified by teacher's guide.	12	13	0	5	0	122	4.06	26.34	S	83.3
5	It has becomes the real guide for the teacher's who are teaching compulsory mathematics at primary level.	2	14	3	8	3	91	3.03	16.34	S	53.4
6	It is Just a guide of a text book.	3	6	0	16	5	76	2.53	24.34	S	30.3
7	The tactful solutions for the difficult problems of the text book have not been given in teacher's guide.	12	13	2	3	0	124	4.13	24.34	S	83.4

8	The additional exercise made the guide standard.	5	20	2	3	0	117	3.9	43.01	S	83.4
9	It is not necessary for the teacher's to make daily lesson plan because the objectives and instruction materials are mentioned on it .	4	7	0	16	3	83	2.76	25.01	S	36.6
10	It would be better for both institutional and community schools mathematics teachers.	16	7	0	4	3	119	3.96	19.67	S	76.6
11	It becomes a real guide specially for the untrained teachers.	16	7	0	4	3	119	3.96	19.67	S	76.6
12	The guide would be more standard if new modern skills and techniques for effective teaching learning are included rather than solving the problems.	2	6	4	12	5	79	2.63	10.68	S	33.4
13	It is good aspect that there is solution of some problems of text book.	16	7	0`	4	3	119	3.96	25.01	S	76.6
14	It is not always accompanied all the mathematics teachers because of its significant guidance .	0	2	0	20	8	56	1.86	48.01	S	67
15	It should be easily available in the market .	1	11	3	11	4	84	2.8	14.68	S	40
16	Allocated time and weight age of every lesson are fixed ,that helps the teacher to finished the course on time .	15	11	0	4	0	127	4.23	30.34	S	26.7

17	In this guide ,there I no error in printing and language.	7	14	1	6	2	108	3.6	16.51	S	70
18	The language of the guide is not simple and easy to understand .	0	6	5	7	12	65	2.16	12.34	S	20
19	The figure are appropriate and useful for teacher's .	5	14	5	6	0	108	3.6	17.01	S	63.4
20	The topics in teachers guide were arranged according to the text book.	0	15	1	11	3	88	2.93	29.34	S	50
21	The weight age of marks of every topic for examination should be given in it.	15	14	1	0	0	134	4.46	40.34	S	96.7
22	Every mathematics words are given in both English as well as in Nepali language that makes the teachers easy to understand .	17	13	0	0	0	137	4.56	46.34	S	100
23	The objectives of each topic were arranged on the basis of their level of difficulty (simple to complex)	5	7	1	17	0	120	4	30.68	S	40
24	The examples given in teachers guide are related to the daily life activities and experiences of students.	8	12	3	6	1	110	3.66	12.34	S	66.7
25	The examples, formulas and direction given to teach each unit or topic are not sufficient.	0	5	1	16	8	63	2.1	27.68	S	16.7
26	Teaching materials given in teacher's guide are not suitable for the school of Nepal.	0	6	7	5	12	66	2.2	12.34	S	20

27	It would be more helpful for the teachers to make students more practicable if the model question sets were included in it.	16	7	3	3	1	124	4.13	24.01	S	76.6
28	The ambiguities for the teachers about what to do in classroom have been removed by the teaching learning activities given in it.	19	10	0	1	0	139	4.6	47.01	S	96.6
29	Appropriate methods are not given to prepare teaching material.	2	11	0	16	1	87	2.9	33.62	S	43.4
30	Ample Suggestion and hints are given to use the text book in teachers guide.	10	7	0	8	5	99	3.3	9.68	S	56.6

Critical region $\chi^2_{\alpha, v} = \chi^2_{0.054} = 9.488$

S = Stands for significant and

ns = stands for not significant (insignificant)

Appendix – B

LIST OF SELECTED SCHOOL AND CORRESPONDING TEACHERS

S.N	Community	
	Schools	Teachers
1	Tribhuvan Lower Secondary Rising Jajarkot	Prachanda Jung Shah
2	Shiva byawashic Ma.Vi Kalagau Jajarkot	Jay Bdr. Basnet
3	Hunaman Primary Scholl, Thaple Khalanga Jajarkot	Krishna Bdr Singh
4	Shankar Ma.Vi Baunthan Khalanga Jajarkot	Rajendra Karki
5	Ramjanaki Primary Uri Khalanga Jajarkot	Asha Karki
6	Very Primary Khalanga Jajarkot	Purnima Singh
7	Bhannubhakta Lower Secondary School Pajaru Jajarkot	Deep Bdr. Rokay
8	Bhagabati Lower Secondary School Pajaru Jajarkot	Ammar Bdr. Mahatara
9	Nera Ma.Vi. Rintikura, Pajuru, Jajarkot	Satya Devi Khatri
10	Nadai Primary School Garkhakot, Jajarkot	Kali Bdr. Shahi
11	Januk Lower Secondary School Garkhakot, Jajarkot	Prem Kumar Shai
12	Jay Gaurav Primary School Garkhakot, Jajarkot	Hari Bdr. Khadka
13	Bageswari Ma. Vi. Pajaru, Jajarkot	Dil Bdr. Budha
14	Kalika Ma.vi Pajaru, Jajarkot	Pashupati Adhikari
15	Shanti Deep Primary School Pajaru Jajarkot	Hari Bdr. Budha

S.N	Institutional	
	Schools	Teachers
1	Kasturi Boarding School Khalanga, Jajarkot	Dila Ram Pun
2	Shanti Gyankunja Boarding School Khalanga, Jajarkot	Dilli Khadka
3	New Novellist Boarding School Khalanga, Jajarkot	Dinesh Shahi
4	Narpadam Friendship Boarding School Khalanga, Jajarkot	Nar Bdr. Khatri
5	Long River Boarding School Jhapra, Jajarkot	Buddhi Prashad Neupane
6	Dovan Vidhamandir Boarding School Dashara, Jajarkot	Hari Bdr. Shahi
7	Creative English Boarding School Dalli, Jajarkot	Shyam Khatri
8	River Dynamic English Boarding School Kudu Jajarkot	Moti Ram Karki
9	Talent Generasion English School Khalanga, Jajarkot	Jay Bdr. Shahi
10	B.P. Gyanjoti English School Dashara, Jajarkot	Sita Shahi
11	Children warden Academic Suwanauli, Jajarkot	Janak Raj Sharma
12	J.R. Long River Boarding School Majakot, Jajarkot	Samjhana Shahi
13	Shreekrishna English School Majakot, Jajarkot	Jay Bdr. Nath
14	Bagashwari Boarding School Pajaru, Jajarkot	Man Bdr. Adhikari
15	Malika English School Rimma, Jajarkot	Dhirendra Pun

Appendix – C

QUESTIONNAIRE FOR TEACHERS

Dear, sir /Madam

As a part of requirements for the degree in Education, the researcher is going to conduct a study on the topic "Teachers' attitude towards using teacher guide at primary level.

This questionnaire is addresses to you in which 30 statements have been adopted. There is no right or wrong answer. The right answer is your own opinion of feeling sought for the sake of the study. The validity and reliability of the study will depend on your kind co-operation to have your unbiased responses. Please study the statements carefully and give your opinion by putting tick mark (✓) on any of the five ratings for each statements.

The investigator will be obliged to your if you could return the questionnaire presented here will duly filled in, at your earliest convenience. Your responses will be used only for this study .

a) Personal Information

School :

Types of School : Community (.....) Institutional (.....)

Name :

Qualification:.....

Teaching Experience : years..... Month

Training : Trained (.....) Untrained (.....)

Time-period of training : years..... Month

Note- SA: Strongly Agree

A: Agree

U: Undecided

DA: Disagree

SDA: Strong disagree

**Rating Scale for the Opinion of Teachers Towards Mathematics Teachers' Guide
for Primary Level**

b) Questionnaire for Teacher's

S.N.	Statements	SA	A	U	DA	SDA
1	The design and finishing of mathematics teacher's guide of primary level mathematics is good .					
2	The teacher's guide is costly.					
3	The teacher's guide helps to fulfill the objectives of mathematics curriculum.					
4	The real problems faced by mathematics teacher while teaching mathematics are not identified by teacher's guide.					
5	It has becomes the real guide for the teachers who are teaching compulsory mathematics at primary level.					
6	It is Just a guide of a textbook.					
7	The tactful solution for the difficult problems of the text book have not been given in teacher's guide.					
8	The additional exercise made the guide standard.					
9	It is not necessary for the teacher's to make daily lisso plan because the objectives and instruction materials are mentioned on it .					
10	It would be better for both institutional and community schools mathematics teachers.					
11	It becomes a real guide specially for the untrained teachers.					
12	The guide would be more standard if new modern skills and techniques for effective teaching learning are included rather than solving the problems.					
13	It is good aspect that there is solution of some problems of text book.					
14	It is not always accompanied all the mathematics teachers because of its significant guidance .					
15	It should be easily available in the market .					
16	Allocated time and weight age of every lesson are fixed, that helps the teacher to finished the course on time .					

17	In this guide ,there I no error in printing and language.					
18	The language of the guide is not simple and easy to understand.					
19	The figure are appropriate and useful for teacher's.					
20	The topics in teachers guide were arranged according to the text book.					
21	The weight age of marks of every topic for examination should be given in it.					
22	Every mathematics words are given in both English as well as in Nepali language that makes the teachers easy to understand .					
23	The objectives of each topic were arranged on the basis of their level of difficulty (simple to complex)					
24	The examples given in teachers guide are related to the daily life activities and experiences of students.					
25	The examples, formulas and direction given to teach each unit or topic are not sufficient.					
26	Teaching materials given in teacher's guide are not suitable for the school of Nepal.					
27	It would be more helpful for the teachers to make students more practicable if the model question sets were included in it.					
28	The ambiguities for the teachers about what to do in classroom have been removed by the teaching learning activities given in it .					
29	Appropriate methods are not given to prepare teaching materials .					
30	Ample Suggestion and hints are given to use the text book in teachers guide.					

Appendix D

INTERVIEW GUIDELINE

b) Guideline

- (1) Use of Teacher's Guide.
- (2) Availability of teach res guide in school.
- (3) Teachers guide as a facilitator for effective teaching.
- (4) Ample suggestions and hints given in teacher's guide to the efficient use of the textbook.
- (5) Expressions are clear, lively, logical and simple ?
- (6) Correlation between teacher's Guide and text book.
- (7) Presentation of topic according to their difficulty level.
- (8) Use of teacher guide: Compulsion / Optional.
- (9) Presented methods are sufficient and relevant.
- (10) Teachers guide address local needs of teacher's.

Appendix E

NUMBER OF RESPONSES OF TEACHERS ACCORDING TO FIVE CATEGORIES

S.N.	Statements	SA	A	U	DA	SDA
1	The design and finishing of mathematics teacher's guide of primary level mathematics is good .	5	16	0	8	1
2	The teacher's guide is costly.	3	13	3	10	1
3	The teacher's guide helps to fulfill the objectives of mathematics curriculum.	6	17	0	6	1
4	The real problems faced by mathematics teacher while teaching mathematics are not identified by teacher's guide.	12	13	0	5	0
5	It has becomes the real guide for the teacher's who are teaching compulsory mathematics at primary level .	2	14	3	8	3
6	It is Just a guide of a text book.	3	6	0	16	5
7	The tactful solution for the difficult problems of the text book have not been given in teacher's guide.	12	13	2	3	0
8	The additional exercise made the guide standard.	5	20	2	3	0
9	It is not necessary for the teacher's to make daily lisso plan because the objectives and instruction materials are mentioned on it .	4	7	0	16	3
10	It would be better for both institutional and community schools mathematics teachers.	16	7	0	4	3
11	It becomes a real guide specially for the untrained teachers.	16	7	0	4	3

12	The guide would be more standard if new modern skills and techniques for effective teaching learning are included rather than solving the problems .	2	6	4	12	5
13	It is good aspect that there is solution of some problems of text book.	16	7	0	4	3
14	It is not always accompanied all the mathematics teachers because of its significant guidance .	0	2	0	20	8
15	It should be easily available in the market .	1	11	3	11	4
16	Allocated time and weight age of every lesson are fixed ,that helps the teacher to finished the course on time .	15	11	0	4	0
17	In this guide ,there I no error in printing and language.	7	14	1	6	2
18	The language of the guide is not simple and easy to understand .	0	6	5	7	12
19	The figure are appropriate and useful for teacher's .	5	14	5	6	0
20	The topics in teachers guide were arranged according to the text book.	0	15	1	11	3
21	The weight age of marks of every topic for examination should be given in it.	15	14	1	0	0
22	Every mathematics words are given in both English as well as in Nepali language that makes the teachers easy to understand .	17	13	0	0	0
23	The objectives of each topic were arranged on the basis of their level of difficulty (simple to complex)	5	7	1	17	0
24	The examples given in teachers guide are related to the daily life activities and	8	12	3	6	1

	experiences of students.					
25	The examples, formulas and direction given to teach each unit or topic are not sufficient.	0	5	1	16	8
26	Teaching materials given in teacher's guide are not suitable for the school of Nepal.	0	6	7	5	12
27	It would be more helpful for the teachers to make students more practicable if the model question sets were included in it.	16	7	3	3	1
28	The ambiguities for the teachers about what to do in classroom have been removed by the teaching learning activities given in it.	19	10	0	1	0
29	Appropriate methods are not given to prepare teaching material.	2	11	0	16	1
30	Ample Suggestion and hints are given to use the text book in teachers guide.	10	7	0	8	5

Number of Reponses of Teachers According to Five Categories

S.N.	Statements	SA (%)	A (%)	U (%)	DA (%)	SDA (%)
1	The design and finishing of mathematics teacher's guide of primary level mathematics is good .	16.7	53.33	-	26.7	3.3
2	The teacher's guide is costly.	10	43.3	10	33.3	3.3
3	The teacher's guide helps to fulfill the objectives of mathematics curriculum.	20	56.7	-	20	3.3
4	The real problems faced by mathematics teacher while teaching mathematics are not identified by teacher's guide.	40	43.3	-	16.7	-
5	It has becomes the real guide for the teacher's who are teaching compulsory mathematics at primary level .	6.7	46.7	10	26.7	10
6	It is Just a guide of a text book.	10	20	-	53.3	16.7
7	The tactful solution for the difficult problems of the text book have not been given in teacher's guide.	40	43.3	6.7	10	-
8	The additional exercise made the guide standard.	16.7	66.7	6.7	10	-
9	It is not necessary for the teacher's to make daily lisso plan because the objectives and instruction materials are mentioned on it .	13.3	23.3	-	53.3	10
10	It would be better for both institutional and community schools mathematics teachers.	53.3	23.3	-	13.3	10
11	It becomes a real guide specially for	53.3	23.3	-	13.3	10

	the untrained teachers.					
12	The guide would be more standard if new modern skills and techniques for effective teaching learning are included rather than solving the problems .	6.7	26.7	13.3	40	13.3
13	It is good aspect that there is solution of some problems of text book.	53.3	23.3	-	13.3	10
14	It is not always accompanied all the mathematics teachers because of its significant guidance .	-	6.7	-	66.7	26.7
15	It should be easily available in the market .	3.3	36.7	10	36.7	13.3
16	Allocated time and weight age of every lesson are fixed ,that helps the teacher to finished the course on time .	56	36.7	-	13.3	-
17	In this guide ,there I no error in printing and language.	23.3	46.7	3.3	20	67
18	The language of the guide is not simple and easy to understand .	-	20	16.7	23.3	40
19	The figure are appropriate and useful for teacher's .	16.7	46.7	16.7	20	-
20	The topics in teachers guide were arranged according to the text book.	-	50	3.3	36.6	10
21	The weight age of marks of every topic for examination should be given in it.	50	46.7	2.3	-	-
22	Every mathematics words are given in both English as well as in Nepali language that makes the teachers easy to understand .	56.7	43.3	-	-	-
23	The objectives of each topic were	16.7	23.3	3.3	56.7	-

	arranged on the basis of their level of difficulty (simple to complex)					
24	The examples given in teachers guide are related to the daily life activities and experiences of students.	26.7	40	10	20	3.3
25	The examples, formulas and direction given to teach each unit or topic are not sufficient.	-	16.7	3.3	53.3	26.7
26	Teaching materials given in teacher's guide are not suitable for the school of Nepal.	-	20	23.3	16.7	40
27	It would be more helpful for the teachers to make students more practicable if the model question sets were included in it.	53.3	23.3	10	10	3.3
28	The ambiguities for the teachers about what to do in classroom have been removed by the teaching learning activities given in it.	63.3	33.3	-	3.3	-
29	Appropriate methods are not given to prepare teaching material.	6.7	36.7	-	53.3	3.3
30	Ample Suggestion and hints are given to use the text book in teachers guide.	33.33	23.3	-	26.7	16.7