Chapter I

INTRODUCTION

Background of the Study

Mathematics directly concern with human being. It is a process of learning and express of human mind concern with the ideas and process. In the early period, mathematics was used by vocal counting sound word to know how many members it have and how many decreasing in size .The earliest way of keeping a count way is by some simple tally method employing the principal of one to one correspondence. Gradually it develop rapidly and related to human life as a language ,basic tool of communication ,essential for solving daily life problems and essential for studying higher education in the field of mathematics.

Mathematics is backbone of our civilization. It would not be exaggeration to say that history of mathematics is history of the mankind. It is an exact science, which is still playing an important role in various ways of life. In our daily life, we must relate the mathematics to history, arithmetic and algebra grew out of men's need for counting financial, management and other simple operation of daily life. Geometry and trigonometry develop from problems of land measurement, surveying and astronomy and calculus are invented to assist in the solution of certain basic problems in physics.

In recent years new forms of mathematics have been inventing to help us for solving core problems in social science, business and biology.

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 and music, where mathematics studies. The liberal arts, in the ancient Greek when studied for the aesthetic value but, when the society changed, the needs and demands of society were also changed and this resulted in a change in the aim of education.

Mathematics education in 21th century is not limited to aesthetic value, but as a subject to be taught to meet the needs and demands of rapidly growing society due to

the change in the science and technology. Thus the aim of the mathematics education is to meet the challenges that the society is facing because of the advent of science and technology.

"Mathematics" and "life" are related to each other like a relation between nail and muscle. Mathematics like language is a basic tool of communication. Mathematics is essential for Daly life as well as for the higher study in the field of science and technology. Every citizen must deal regularly in market where he has to use mathematical concept and skill. Mathematics learning helps the student to understand and interpret the very important quantitative aspect of living. Mathematics is an essential part of human life, so it is fulfill the needs of human being and thus the nature and structure of the mathematics is build with the development of human life. Primitive men used the counting number for their cattle and members in the family for which they use stones or stick and the concept of one to one correspondence.

After the establishment of state, mathematics is need for getting information about population, distance, time, area, size, counting etc. Mathematics become insufficient and the different concepts, axioms and theories ware developed and slowly the new fields of mathematics to get develop. It get develop through the ancient civilizations like Babylonian, Egyptian, Roman, Greek, Arab, and Hindus and the Mathematicians like Pythagoras, Euclid, Plato, Archimedes, Ptolemy, Papus, Descartes, Gauss, Cantor , Newton contributed for its development.

It is use in every field such as worker industry, science, engineering, business, arts etc. In every area of modern society, the importance of mathematics is very increasing. Understanding of mathematics is essential for higher study in different discipline. Importance of mathematics, the number of student seeking admission in the various fields of science and technology is increasing day by day. Educated parents want their son and daughter will study these subjects. But most of them will not know about the various psychological factors for their children's interest, whether their children will get a favorable attitude for the study of the particular subject or not.

Mathematics is also a powerful learning tool. As student's identity relationship between mathematics concept and everyday situation and make connection between mathematics and other subjects they gain the ability to use mathematics to extent and apply their knowledge in other curricular areas such as science, music and language.

Mathematics achievement is essential to human life for superior living in present science and technological period. Mathematical skill should provide support to every society for their development. As a whole mathematics increased the logical thinking, understanding capacity and efficient in human being. Therefore, mathematics skill is most important and essential part of human life. With mathematics, people experience easy to live this world.

Mathematics achievement is indispensable to our daily life counting object, reading, and writing numerals. Performing arithmetic, calculating, reading and as well as reasoning with number are the takes most people have to perform in their lives. Mathematics achievement is also central to almost all branches of science and technology. A strong background in mathematics is necessary for almost all technical careers in society. Mathematics achievement has not only been useful in its own right but it has also enriched in the development of other field of knowledge. According to Maskey(1996), education has always been the most effective medium through which virtues like honestly, kindness, love, co-operation and scarified are instilled into human mind One those far off days. When religion reigned supreme the major aim of education was to important morality and the religious institutes were the centers of education.

Development of mathematical concept is a major achievement of human civilization. But failure in general and repeaters in particular will have been serious problem at all level of education in Nepal. Moreover, if these failures in mathematics language remain the same problems become more serious as mathematics. In this context, the national education system plan (NESP mathematics 1971) stage the importance of mathematics curriculum in the following words.

The problem of academic failure presents a great challenge before the educationist, professional and other persons who were working in the field of mathematics education. Since it is difficult to get hold of the unsuccessful candidates or investigating their especial causes responsible for their high failure rate. Hence an indirect approach can be adopted to study the characteristics of such students for investigating the possible cause of their SLC level Examination failure.

Statement of the Problem

The problem of study mainly concerned with the comparison of mathematics achievement of SLC level Examination students coming from Yadav, Sah, Dalit and Brahmin communities enrolled in public and privet school of Dhanusha District . So this study intends to answer the following questions.

) Does the mathematics achievement of Dalit, Yadav and Sah differ from the Brahmin students of Public school?

) Does the mathematics achievement of Dalit, Yadav and Sah differ from the Brahmin students of Private school?

) Does the mathematics achievement of Private school differ from the Public school students?

Objectives of the Study

The main purpose of the study is to compare the mathematics achievement of SLC level Examination students of different cast group. This study intended to accomplish the following objectives.

) To compare the mathematics achievement of Dalit, Yadav, Sah and Brahmin students on SLC Examination of Public school.

) To compare the mathematics achievement of Dalit, Yadav, Sah and Brahmin students on SLC Examination of Private school.

) To compare the mathematics achievements of Public and Private school students.

Significance of the Study

Mathematics is essential tools for the further study and the future of all physical, biological, social and management science. Every students should strive for a better achievement, because of the importance is to give without better academic achievement the students neither study further nor get entrance into any Job market. For the improvement of students achievement in school mathematics, humorous researchers are engaged into indentify the variables the students. The present study seeks to provide information regarding the achievements of the students of the Dalit, Yadav, Sah and Brahmin in SLC Examination. That is a fact not only of the physical characteristic of Dalit, Yadav, Sah and Brahmin but also of their inherent and their intellectual attainment. The present study has following significance.

- The result of the study is providing the information to the teachers and parents about the mathematics achievement on SLC Examination of Yadav , Sah, Dalit and Brahmin students.

- The study would be helpful for education planners, policy makers and concerned agencies to reform the education system.

- The study would be helpful for teacher, parents and students to know only ethnic cast is not a factor of less achievement.

- The result of this study would be helpful for future researcher to compare in different cast students.

- The result of this study would be helpful for future researcher and planner to compare in Public and Private school in other districts.

Hypothesis of the study

The statistical hypothesis formatted in this study were as follows

1. $H_0: \mu_1 = \mu_2$ (Null Hypothesis)

   $H_1: \mu_1 \neq \mu_2$ (Alternative hypothesis)

Where μ_1, and μ_2, are the corresponding parametric means of mathematics achievement of different cast group of Public school students.

2. H_0: $\mu_3 = \mu_4$ (Null Hypothesis)

    H_1: $\mu_3 \quad \mu_4$ (Alternative hypothesis)

    Where μ_3, and μ_4, are the corresponding parametric means of mathematics achievement of different cast group of Private school students.

3. H_0: $\mu_5 = \mu_6$ (Null Hypothesis)

    H_1: $\mu_5 \quad \mu_6$ (Alternative hypothesis)

    Where μ_5, and μ_6, are the corresponding parametric means of mathematics achievement of Public and Private school.

Delimitation of the Study

The study has the following delimitations.

) This study was delimited to only Dhanusha districts.

) The study was delimit to the students of public and Private school of Dhanusha districts.

) The sample of study was selected by stratified random sampling from dhanusha district.

) The population of the study was limited to SLC Examination of dhanusha district where Dalit Yadav, Sah & Brahmin students.

Definition of the Related Term

Dalit Students: One of the backward group people who are Dalit. Those students whose parents are Dalit and norms, behavior are adopted under Dalit culture. Their main festivals are salhes, vairab and prakirtik puja also. Most of the Dalit people called indigenous such as Chamar, Dom, Dhanikar, Mandal Dhanuk and Musahar etc.

Yadav students: One of the group of people who live in Trai region in south of Nepal. Whose ancient period of Gopal like this mahispal who keep buffalo.

Sah: One of the group of people who live in Trai and India in Bihar state also. They work especially business, shop, and agriculture.

Brahmin Student: One of the group people who are Brahmin. Those whose parents are Brahmin and the norms, behaviors are adopted under Bramin culture such as Dhashain, Tihar, Teej, Bhai and teeka are main featival of thes students.

Parents : mean father, mother, and guardians of concerned students.

Basic Mathematical Concept: In this study the term Basic mathematical concepts refer to the basic concepts of counting, measuring and calculating (additions subtraction, multiplication and division, etc).

Literate: According to (NESP1971), literate means being able to read and write generally Nepali and perform fundamental mathematical operations in daily life.

Achievement: Achievement in this study is define in terms of the cross obtained by the students I) Result gained by effort. ii) Something that has been done or achieved through effort.

Chapter II

REVIEW OF THE RELATED LITERATUTRES

In order to get a better understanding of the subject of one's study, it is essential and helpful to review the literature and studies relevant and related to it. The related studies construct the platform for standing to the research which gives the theoretical support for the study. In fact that the review of the related studies give direction for researcher to make his problem more realistic, researchable and meaningful. It also gives better ideas to forward for research. During the past decade, mathematics has developed many technical reasoning and ideas of research method and they have contribute to upgrade mathematics. The textbook, dictionary, journal, articles were studied. Research study in any field of knowledge requires an adequate familiarity with the works which have already been done in the same area. Review of previous studies and the authorities of the concerned fields of study to eliminate the duplication of what has been done and provides useful hypothesis and helpful suggestion for further study. Therefore, the review section of the research report is considered very important part. The purpose of review of literature is to expand upon the context and background of research. In the course of writing the thesis works, the researcher reviewed and studied different literature which one as follows:

Rahman (1981) studied on Achievement in mathematics of seventh grade students in selected schools of Kathmandu Nager Panchayat Area " with the aims to investigate whether sex influenced the achievement in mathematics. The t-test was applied to conclude that the superiority of the boys over the girls with respect to achievement in mathematics as school subject with regard to achievement in mathematics.

Neupane (1985) did a research on "Achievement in mathematics by location and sex" A study of the achievement of eighth grade students in mathematics in selected school of kaski district with the aim to compare the achievement of urban students with rural students in mathematics in the four levels of the cognitive domain

and to determine whether the sex of students influences their achievement in mathematics in the four levels of the cognitive domain.

Karki (1997) did his research on "A comparative study of mathematics achievement of grade IV students in Okhaldhunga and Solukhumbu district " It was concluded that, achievement in mathematics by the grade IV students of Okhaldunga and Solukhumbu was 46.12 percent and mean achievement in mathematics of grade IV boys and girls was similar. Location of the school, districts, sex etc. did not play a significant role in the achievement in mathematics.

An international research report (2000), about achievement different between types of school and groups of school, concluded these pupils in urban area perform, on average better than their counter parts in rural areas. The reason generally, given include the fact that big cities area have relatively large proportion of high socio- economic status familiars school in such areas often have better facilities and are in favorable position to attract good teachers further the report should depict that in developing countries, the boys have an advantage over girls including retention and dropout rate.

Pandit (2001), Conduct the thesis for Master Degree on Attitude of secondary schools and their parent toward mathematics and other subject of instruction." With a view to explore the attitude of secondary schools students and their parents toward mathematics in relation to other schools subject and to investigate the influence sex on the attitude of students and their parent toward mathematics. He concludes that home environment and parental back ground affect the mathematics achievement.

Kunwar (2003), study on "Mathematics Achievement of Hybrid and non hybrid Students." The major objectives was compared the mathematics achievement of hybrid and non hybrid students. The researcher adopted sample to hybrid students and random sample of non hybrid students where as the sample schools had selected randomly and found that the mean achievement in mathematics of hybrid students have higher than that of non hybrid students. The design of the study was quantitative survey. He used achievement test as research tool and t-test was to analyze the data.

So it is concluded that there is a significant difference in the achievement of mathematic between hybrid and non hybrid students.

Regmi (2004), did a research study on the topic "A study of achievement in mathematics of Gurung and kumal student at primary level". The study has intended to provide the information to teachers and parents about the mathematics achievement level of kumal and Gurung students and help to create the appropriate environment of the school as well as home. The main objective of the study has to find out the difference on mathematics achievement of Gurung and Kulal students. The assumption of the study have that there have no significant difference between mathematics achievement of Gurung and Kumal students. The researcher has analyzed the collect data by calculating the main and standard deviation of the scores of the sampled students. The t-test with two tailed test used to test the researcher hypothesis.

Gyawali (2006), studied on "Mathematics Achievement of Grade Five students from Yadav and Chamar community in rupandehi District". The main objective of the study was compare the mathematics achievement of Yadav and Chamar students. He used simple random sampling for the selection of sample. He used achievement test as research tool and t-test to analyze the data. And conclude that the mean of mathematics achievement of Yadav students was greater than Chamar students.

Yadav (2009), studies on "Mathematics achievement of secondary level students of Tharu and Koiri caste". The main objective of the study was to compare the mathematics achievement of Koiri children and Tharu children of Sunsari district. He used random sampling for the selection of sample. He also used achievement test as research tool and t-test was use to analyze the data and conclude that the mathematics achievement of Tharu is less than the Koiri student.

Jha (2011), studied on "A study of Achievement in mathematics of Gurung and thami at primary level in Sindhupalchok District". The main objective of the study was to compare the mathematics achievement of Gurung and Thami Children.

The design of the study was survey type. He used achievement test as mean research tool and t- test to analyze the data.And found that the mean mathematics achievement of Gurung students was greater than Thami students.

Ansari (2011), Conducted a study entitled study on the comparison of mathematics achievement of Madarsa and public primary schools in Nawlprasi District have shown that public school students have better achievement than the students of madarsa students in the area of mathematics and cognitive level. He also conclude that social-economic factor affect the mathematics achievement in the muslim community.

Bohara (2011), studies on "Mathematics achievement among Chhetri and Tharu children of grade X in Bardiya districts". The main objective of the study was to compare the mathematics achievement of Chhetri and Tharu students. The design of the study was survey type. He use achievement test as research tool and t-test to analyze the data. And conclude that mathematics achievement between Tharu and Chhetri students was significantly different.

Sapkota (2012), study on " A comparative study on secondary school Mathematics Achievement of Baramin and Gurung students." The main objective of the study was to compare the mathematics achievement of Gurung and Brahmin students. The design of the study was survey type. He use achievement test as main research tool and t-test to analyze the data. He concluded that, the mathematics achievement of Gurung students were higher than Brahmin students and home environment, socio- economic status, parent occupation and study hour affected mathematics achievement of the students.

Uprety (2013), Studies on Mathematics achievement of Brahmin and Dalit students of grade VIII in Bardiya districts ". The main objects of the study was to compare the mathematics achievement of Brahmin and Dalit students. The design of this study was survey type. He used achievement test as research tool and t test was used to analyze the data. From the analysis and interpretation of data he conclude that mathematics achievement between Brahmin and Dalit students was significantly difference and Brahmin students have better achievement then Dalit students in Bardiya district.

Chapter III

METHODS AND PROCEDURES

The major purpose of the study is to compare the mathematics achievement Yadav, Sah, Dalit and Brahmin students of SLC level Examination of Dhanusha District. For this purpose statistical method and qualitative analysis of the data used to analyze, interpret and generalize the outcomes of the study. Details of this study gave under separate headings such as population and sample, size, tools, data, collection procedures, statistical tools.

Design of the Study

This is survey study related to mathematics achievement of Brahmin, Yadav, Sah and Dalit students at SLC level Examination. The researcher followed the SLC level examination mark ledger and schools mark obtained. The researcher followed the quantitative technique in this research in which numerical data was analyzed by using statistical technique.

Population of the study

The populations of the study were the students of Dhanusha Districts who were participating in SLC level examination in the academic year 2069 of Dhanusha districts. The total number of SLC level examination students of this districts were 8655 in which 5141 boys and 3514 girls.

Sample of the Study

The sample of the study included 610 students of SLC level examination in 2069 with 357 Public school students and 253 Private school students from Dhanusha district. Seven Public school and Seven Private schoolfrom the district were chosen stratified random sample method for the study.179 Yadav, 170 Sah, 113 Dalit and 148 Brahmin students of selected 14 school were the sample of this study .The number of students in the sample was presented in the table below.

Table No. 1

The detail description of sample of public school students

S/N	Name of Schools	Dalit	Yadav	Sah	Brahmin	Total
1	Ma.Vi. Aurahee	8	10	7	0	
2	K.S.H. Maa.Vi. Khajuri	18	20	13	15	
3	Yadav Ma.Vi. Belhi	5	10	8	7	
4	JantaEkaiMa.ViYadukoha	15	23	19	25	
5	SarsawatiMa.Vi.Janakpur	10	17	25	10	
6	JantaMa.ViJanakpur	11	14	10	10	
7	Tapasi Baba Ma.Vi.Tilhi	9	18	12	8	
	Total	**76**	**112**	**94**	**75**	**357**

Five Rural Area Public schools and Two Urban Area Public schools were chosen purposive random sample method for the study in which 76 Dalit students, 112 Yadav students,94 Sah students and 75 Brahmin students were taken.

Table No. 2

The detail description of sample of private school students

S/N	Name of Schools	Dalit	Yadav	Sah	Brahmin	
1	Sidharthshisusadan B. School,Jankpur.	10	11	9	10	
2	Moonlight Secondary English School.	5	9	11	8	
3	Monastik Higher Secondary B.SJankpur.	10	14	19	20	
4	New Eng.B.S.Jankpur.	4	12	17	15	
5	Mother Teresha B.S. Janakpur.	5	14	10	15	
6	DhanushaPub.Sec.S. Janakpur.	1	5	6	5	
7	Eureka Eng. B.S. Janakpur.	2	2	4	0	
	Total	**37**	**67**	**76**	**73**	**253**

Instruments

This study intended to compare the achievement of Dalit, Yadav, Sah and Brahmin students of SLC level examination 2069.

Achievement of Mark

Investigator went to selected schools, meet the head teacher and other teacher staffs. Explain in detail the purpose of the visiting. The researcher would be selected the name of the students by help of teacher and head teacher according as objective. Then the achievement score of each selected were listed. This approach was followed in all of the selected school in sample.

Data Collection Procedure

The researcher at first visited to the selected schools and met the Head teacher and other teacher staffs and explain in detail the purpose of visiting then by the help of marks ledger, the students marks were collected.

Data analysis Procedure

The researcher with the help of the selected school would conduct the list of SLC level examination achievement score held in 2069 Dhanusha and analyzed data using statistical device. The researcher analyzed the data by calculating the mean ($\overline{X}$), standard deviation (σ) of the score of the sampled students. The statistical tool of t-test and f-test (one tailed at 0.05 level of significance) was used to find out the significant difference between mean score of the mathematics achievement of Dalit, Yadav, Sah and Brahmin students. To compare the achievement of Public and Private school students, t test with pooled sample variance was applied.

Chapter- IV

ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with the analysis and interpretation of data obtained from the score of the sample students in the SLC level examination 2069 B.S. The collected data were tabulated and analyzed by using mean, standard deviation and two tailed t-test. The data was analyzed under the following.

)   Comparison of the mathematics achievement of public School Dalit and Yadav students.

)   Comparison of the mathematics achievement of public School Dalit and Sah Students.

)   Comparison of the mathematics achievement of public School Dalit and Brahmin students.

)   Comparison of the mathematics achievement of public School Yadav and Sah Students.

)   Comparison of the mathematics achievement of public School Yadav and Brahmin students.

)   Comparison of the mathematics achievement of public School Sah and Brahmin students.

)   Comparison of the mathematics achievement of Private School Dalit and Yadav students

)   Comparison of the mathematics achievement of Private School Dalit and Sah students.

)   Comparison of the mathematics achievement of the Private school Yadav and Sah students.

)   Comparison of the mathematics achievement of the Private school Yadav and Brahmin students.

J Comparison of the mathematics achievement of public and private students.

Comparison of Mathematics Achievement of Dalit, Yadav, Sah & Brahmin Students of Public School

The mean square, SST, SSC, SSE & F Value of the data obtain from Dalit, Yadav, Sah, Brahmin students presented in the following table 3

Table No. 3

Comparison of mathematics achievement of public school students

Source of Variation	Sum of square	Degree of freedom	Mean square	F
Column means	2619.36	3	873.12	2.74
Errors	89559.78	353	317.58	
Total	92179.17	356		

From the above table no. 3. It was found that total number of students participated in the compare caste groups were 357. It was found that sum of square was 2619.36 & sum square errors was 89559.78. Also it was found that means square was 873.12 & means square errors 317.58. The calculated value of F was 2.74 which is greater than the tabulated value of F that is 2.60 at 0.05 level of significance. Since the calculated value $2.74 > 2.60$ which shows that the null hypothesis is rejected and concluded that there is significant difference between the achievement of students of different group students.

Comparison of Mathematics Achievement of Dalit, Yadav, Sah & Brahmin Students of Private School

The mean square, SST, SSC, SSE & F Value of the data obtain from Dalit, Yadav, Sah, Brahmin students presented in the following table no. 4

Comparison of Mathematics Achievement of Dalit, Yadav, Sah & Brahmin Students.

Comparison of mathematics achievement of private school students

Source of Variation	Sum of square	Degree of freedom	Mean square	F
Column means	776.05	3	258.68	5.21
Errors	10620.16	249	49.62	
Total	11396.21	252		

From the above table no. 4. It was found that total number of students participated in the compare caste groups were 253. It was found that sum of square was 776.05 & sum square errors was 10620.16. Also it was found that means square was 258.68 & means square errors 49.62. The calculated value of F was 5.21 which is greater than the tabulated value of F that is 2.60 at 0.05 level of significant. Since the calculated value 5.21 > 2.60 which shows that the null hypothesis is rejected and concluded that there is significant difference between the achievement of students of different group students.

Comparison of Mathematics Achievement of Dalit, Yadav, Sah & Brahmin Students

The mean square, SST, SSC, SSE & F Value of the data obtain from Dalit, Yadav, Sah, Brahmin students presented in the following table no. 5

Comparison of Mathematics Achievement of Dalit, Yadav, Sah & Brahmin Students.

Table No. 5

Comparison of mathematics achievement of students

Source of Variation	Sum of square	Degree of freedom	Mean square	F
Column means	4247.71	3	1415.90	13.48
Errors	52414.03	606	105.03	
Total	56661.74	609		

From the above table no. 5. It was found that total number of students participated in the compare caste groups were 610. It was found that sum of square was 4247.71 & sum square errors was 52414.03. Also it was found that means square was 1415.90 & means square errors 105.03. The calculated value of F was 13.48 which is greater than the tabulated value of F that is 2.60 at 0.05 level of significant. Since the calculated value 13.48 > 2.60 which shows that the null hypothesis is rejected and concluded that there is significant difference between the achievement of students of different group students.

Comparison of the Mathematics achievement of Dalit and Yadav of Public Schools in SLC Examination

The mean, standard deviation and corresponding t-value of the data obtained from Dalit and Yadav students presented in the following Table 6.

Table No. 6

Comparison of Mathematics achievement of Dalit and Yadav students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Dalit	76	40.76	15.32	2.97	2.97>1.96
Yadav	112	45.23	18.45		

From the above table No.6. It was found that total number of students participated in the compare caste group were 188. It was found that the mean achievement of Dalit and Yadav students were 40.76 and 45.23 with standard deviation 15.32 and 18.45 respectively. Hence the mean score of the mark obtained by Dalit is lower than the mean score of by Yadav students (the amount 3.13). The calculated value of t was 2.976 the tabulated t- value at 0.05 level was1.96.It shows that the null hypothesis of no difference in achievement between Dalit and Yadav students is rejected. It is concluded that there is significant difference in mathematics

achievements between Dalit and Yadav students. It means that the Yadav students have better achievement than Dalit students.

Comparison of the Mathematics Achievement of Dalit and Sah students of Public Schools

The mean, standard deviation and corresponding t-value of the data obtained from Dalit and Sah students on SLC examination 2059 were presented the following Table 7.

Table No. 7

Comparison of Mathematics achievement of Dalit and Sah students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Dalit	76	40.76	15.32	2.57	2.57>1.96
Sah	94	43.01	17.72		

From the above table No.7. It was found that total number of students participated in the compare caste group were 170. It was found that mean achievement of Dalit and Sah were 40.76 and 43.01 with standard deviation 15.32 and 17.72 respectively. The calculated t-Value was found to be 2.57 which is greater than the tabulated value of t at 0.05 level of significant. Hence the null hypothesis is rejected and concluded that there is significant difference between the achievement of Dalit & Sah students and Sah students have better achievement than Dalit students of Dhanusha District.

Comparison of the mathematics Achievement of Dalit and Brahmin Students of Public School

The mean, standard deviation and corresponding t-value of the data obtained from Dalit and Brahmin students on SLC examination presented the following Table 8.

Table No.8

Comparison of Mathematics achievement of Dalit and Brahmin students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Dalit	76	40.76	15.32	3.51	3.51>1.96
Brahmin	75	50.16	20.14		

From the above Table No.8. It was found that total number of students participated in the compare cast group were 151. It was found that the mean achievement score of Dalit and Brahmin students were 40.76 and 50.16 with standard deviation 15.32 and 20.14 respectively .It shows that the achievement of Brahmin students were greater than the Dalit students by 4.82. The calculated value of t i.e.(t)=3.51 is greater than the tabulate value of t that is 1.96 at 0.5 level of significant . Hence there is significant difference between the mean achievement of Dalit and Brahmin students. It indicates that Brahmin students have better mean achievement than Dalit.

Comparison of the Mathematics achievement of Yadav and Sah students of Public School.

The mean, standard deviation and corresponding t-value of the Mathematics achievement of Yadav and Sah Students on SLC examinations presented the following Table 9.

Table No. 9

Comparison of Mathematics achievement of Yadav and Sah Students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Yadav	112	45.23	18.45	1.27	1.27<1.96
Sah	94	43.01	17.72		

From the above Table No.9. It was found that total number of students participated were 206. It was found that the mean achievement score of Yadav and Sah were 45.23 and 43.01 with standard deviation 18.45 and 17.72 respectively. The calculated t-value is 1.27 Since the calculated t- value is less than the tabulated t-value1.96, the difference in the mean is found to be insignificant at 0.05 level of significance. It indicates that there is no significant difference between the achievement of Yadav and Sah student on SLC examination.

Comparison of the Mathematics Achievement of Sah and Brahmin students in Publics Schools

The mean, standard deviation and corresponding t-value of the Mathematics achievement of Sah and Brahmin student in SLC examination who studied in public school are presented in Table 10.

Table No. 10

Comparison of Mathematics achievement of Sah and Brahmin Students

Cast	Number of students	Mean	Standard Deviation	t-value	Remark
Sah	94	43.01	17.72	3.91	3.91>1.96
Brahmin	75	50.16	20.14		

From the above Table No.10. It was found that total number of students participated in compare group were 169. It was found that the mean achievement score of Sah and Brahmin were 43.01 and 50.16 with the standard deviation of 17.72 and 20.14 respectively. It shows that the achievement of Brahmin students were greater than Sah Students by 2.42. The calculated t-value was found 3.91 which is greater than the tabulated value of t- that is 1.96 at 0.05 level of significant. It indicated that there is significant difference between the mean achievement of Sah and Brahmin students. It indicate that Brahmin students have better achievement than Sah.

Comparison of the Mathematics Achievement of Public Schools Yadav and Brahmin Students.

The mean, standard deviation and corresponding t-value of the data obtained from Yadav and Brahmin student on SLC examination is presented below.

Table No 11.

Distribution of Mean, Standard deviation and t-value of Yadav and Brahmin students

Gender	Number of students	Mean	Standard Deviation	t-value	Remark
Yadav	112	45.23	18.45	1.74	1.74<196
Brahmin	75	50.16	20.14		

From the above table No. 11. It was found that total number of students participated in the compare cast group were 187. It was found that mean achievement of Yadav and Brahmin were 45.23 and 50.16. With standard deviation 18.45 and 20.14 respectively. The calculated t-Value was found that 1.74 which is less than tabulated value of t that is 1.96 at 0.05 level of significant. Hence the null hypothesis that there is significant difference between the mean achievement of Yadav and Brahmin is accepted and indicate that there is no significant difference between the mathematics achievement of Brahmin & Yadav students in SLC examinations 2069.

Comparison of the Mathematics achievement of Dalit and Yadav students of Private Schools

The mean, standard deviation and corresponding t-value of the data obtained from Mathematics achievement of Dalit and Yadav students presented in Table 12.

Table No. 12

Comparison of Mathematics achievement of Dalit and Yadav students

Cast	Number of students	Mean	Standard Deviation	t-value	Remark
Dalit	37	45.18	16.02	2.69	2.69>1.96
Yadav	67	55.65	20.40		

From the above table No. 13. It was found that total number of students participated in the compare caste group were 104. It was found that mean achievement of Dalit and Yadav were 45.18 and 55.65. With standard deviation 16.02 and 20.40 respectively. The calculated t-value was found that 2.69 which is greater than tabulated value of t that is 1.96 at 0.05 level of significant. Hence the null hypothesis is that there is no significant difference between the mean achievement of Dalit and Yadav. It indicate that Yadav have better achievement than the Dalit students.

Comparison of the Mathematics achievement of Dalit and Sah Students of Private school.

The mean, standard deviation and corresponding t-value of the data obtained from Dalit and Sah students are presented in Table 14.

Table No. 14

Comparison of Mathematics achievement of Dalit and Sah Students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Dalit	36	45.18	16.02	2.81	2.81>1.96
Sah	76	56.04	20.95		

From the above table No.14. It was found that total number of students participated in the compare group were 113. It was found that mean achievement of

Dalit and Sah were 45.18 and 56.04 with standard deviation 16.02 and 20.95 respectively. The calculated t-value was 2.81 which is greater than the tabulated value of t that is 1.96 at 0.05 level of significant. Hence the null hypothesis is rejected and concluded that there is significant difference between the Dalit & Sah students. It indicts Sah students have better achievement than the Dalit students.

Comparison of the Mathematics achievement of Dalit and Brahmin students of Private Schools.

The mean, standard deviation and corresponding t-value of the data obtained Mathematics achievement from Dalit and Brahmin students are presented in Table.15.

Table No. 15

Comparison of Mathematics achievement of Dalit and Brahmin Students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Dalit	37	45.18	16.02	3.98	3.98>1.96
Brahmin	73	61.65	22.40		

From the above table No. 15. It was found that total number of students participated in the compare caste group were 110. It was found that the mean achievement of Dalit and Brahmin were 45.18 and 61.65 With standard deviation 16.02 and 22.40 respectively. The calculated t-Value was found that 3.98 which is greater than tabulated value of t that is 1.96 at 0.05 level of significant. Hence the null hypothesis of no difference is rejected and concluded that there is significant difference between the achievements of Brahmin and Dalit students. It indicate that Brahmin have better achievement than the Dalit students.

Comparison of the Mathematics achievement of Yadav and Sah students of Private Schools.

The mean, standard deviation and corresponding t-value of the data obtained from Mathematics achievement of Yadav and Sah students are presented in Table 16.

Table No. 16

Comparison of Mathematics achievement of Yadav and Sah Students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Yadav	67	55.65	20.41	0.112	0.112<1.96
Sah	76	56.04	20.95		

From the above table No.16. It was found that total number of students participated in the compare group were 143. It was found that mean achievement of Yadav and Sah were 55.65 and 56.04 with standard deviation 20.41 and 20.95 respectively. The calculated t -value was found that 0.112 which is less than the tabulated value of t that is 1.96 at 0.05 level of significant. Hence the null hypothesis is accepted and concluded that at 0.05 level of significant there is significant difference between the mean achievement of Yadav and Sah students.

Comparison of the Mathematics achievement Yadav and Brahmin students of private Schools.

The mean, standard deviation and corresponding t-value of the data obtained from Mathematics achievement of Yadav and Brahmin students presented in Table 17.

Table No. 17

Comparison of Mathematics achievement of Yadav and Brahmin students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Yadav	67	55.65	20.40	1.65	1.65<1.96
Brahmin	73	61.65	22.40		

From the above table No. 17. It was found that total number of students participated in the compare caste group were 140. It was found that mean

achievement of Yadav and Brahmin were 55.65 and 61.65 with standard deviation 20.40 and 22.4.respectively. The calculated t-value was found that 1.65 which is less than tabulated value of t that is 1.96 at 0.05 level of significance. Hence the null hypothesis is accepted that there is no significant difference between the mean achievement of Yadav and Brahmin students. It indicate that the Brahmin students have better achievement than the Yadav students.

Comparison of the Mathematics achievement of Sah and Brahmin students of private Schools.

The mean, standard deviation and corresponding t-value of the data obtained from mathematics achievement of Sah and Brahmin students presented in Table 18.

Table No 18

Comparison of Mathematics achievement of Yadav and Brahmin students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Sah	76	56.04	20.95	1.57	1.57<1.96
Brahmin	73	61.65	22.40		

From the above table No.18. It was found that total number of students participated in the compare caste group were 149. It was found that mean achievement of Sah and Brahmin were 56.04 and 61.65 with standard deviation 20.95 and 22.40 respectively. The calculated t-Value was found that 1.57 which is less than the tabulated value of that is 1.96 at 0.05 level of significant. Hence the null hypothesis is accepted and found that there is no significant difference between the mean achievement of Sah and Brahmin 26tudents.

Comparison of the Mathematics achievement of Public and Private of Schools students of SLC level Examination

The mean, standard deviation and corresponding t-value of the data obtained from mathematics of Public and Private students presented the following Table 19.

Table No. 19

Comparison of Mathematics achievement of Public and Private School Students

Group	Number of students	Mean	Standard Deviation	t-value	Remark
Public	357	41.14	16.13	4.18	4.18>1.96
Private	253	63.05	23.06		

From the above table No.19. It was found that total number of students participated in the compare school group were 610. It was found that mean achievement of Public and Private School Students were 41.14 and 63.05 with standard deviation 16.13and 23.06 respectively. Hence the mean score of the mark obtained by Public School Students is statistically lower than the mark obtained by Private School students. The calculated value of t was 4.18 which is greater than the tabulated t- value at 0.05 level of significant. It shows that the null hypothesis of no difference is rejected. This data conclude that the private school students have better achievement in Mathematics than Public School students on SLC examination 2069. The major cause of Private schools students have better achievement were well Management, students Parents Education, consciousness and intention on their children and role of teacher in class activities also.

The major cause of better achievement of Brahmin students than Dalit students are followed

Positive home environment and education activities are support to such learning. Parent education status parent level of schooling, father education, mother education, parent occupation etc. effect their children's education achievement. The parents whose education status and respected profession or well paid job, they may create a good education environment among their offspring's. Education aspects on the part of guardian to play a significant and effective result to their children in learning process. The parent with educated and aware can well guide their children to bring them in a good track with the fulfillment of the children's basic requirement for educational background.

Chapter V

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

In this concluding chapter an attempt has been made to summarize and enlist the finding, provided some recommendation for pedagogical purpose. The first section presents the summary of the study, second section presents finding and third section presents the conclusion based on finding. Finally, the last section present the recommendation based on the finding and conclusion of the study.

Summary

The study was conducted to compare the mathematics achievement of Dalit, Yadav, Sah and Brahmin students in SLC level examination. The score of SLC level examination 2069 of Dalit, Yadav, Sah and Brahmin students by Public and Private schools were taken for the analysis. The researcher selected seven Public and seven Private schools of Dhanusha District to compare the achievement The populations of the study were the students of Dhanusha Districts who were participating in SLC level examination in the academic year 2069 of Dhanusha districts. The total number of SLC level examination students of this districts were 8655 in which 5141 boys and 3514 girls. The total students were 610 selected as sample out of Dalit, Yadav, Sah and Brahmin. This is survey study related to mathematics achievement of Brahmin, Yadav, Sah and Dalit students at SLC level Examination. The researcher followed the SLC level examination mark ledger and schools mark obtained. The researcher followed the quantitative technique in this research in which numerical data was analyzed by using statistical technique.. The researcher at first visited to the selected schools and met the Head teacher and other teacher staffs and explain in detail the purpose of visiting then by the help of marks ledger, the students marks were collected. The mean, standard deviation and two tiled t-test were applied to calculate and identifying the actual difference between the achievement of mathematics among Dalit, Yadav, Sah and Brahmin students. On the basis of students achievement in SLC examination hypothesis are tested at 0.05 level of significance in the following.

)   Comparison of the mathematics achievement of Dalit, Yadav, Sah and Brahmin students of Public school.

)   Comparison of mathematics achievement of public schools and private schools.

)   Comparison of the mathematics achievement of Dalit, Yadav, Sah and Brahmin students of Private schools.

Findings

From the analysis and interpretation of collected data by standard procedure, the following results were found.

)   There was significant difference between the achievement of Dalit, Yadav, Sah and Brahmin students in mathematics at Public schools of Dhanusha District. Brahmin students have better achievement of all of the groups.

)   The mean score of Yadav and Sah were not different significantly but they have better achievement than Dalit and lower than Brahmin students.

)   There was no significant difference between the achievement of Sah and Brahmin students of Private school.

)   There was no significant difference between the achievement of Yadav and Brahmin students of Private school.

)   There was no significant difference between the achievement of Sah and Yadav students of Private school.

)   There was significant difference between the mathematic achievement of public and privet school students on the basis of SLC result in Dhanusha District .The Private school students have better achievement than Public school students.

)   The mean score of Yadav and Sah students have higher than Dalit students But less than Brahmin students.

Conclusion of the Study

This study tried to find the difference of mathematics achievement between Dalit, Yadav, Sah and Brahmin students of Public schools. From the finding of study it was concluded that the mathematics achievement of Brahmin is better than the Dalit students. It is also concluded that Yadav students have better achievement than Dalit students But Yadav and Sah students have no more different achievement of each other. And concluded that the Private school students have better achievement than Public school students.

This study tried to find the difference of mathematics achievement between Dalit, Yadav, Sah and Brahmin students of Private schools. From the finding of study it was concluded that the mathematics achievement of Brahmin is better than the Dalit students. It is also concluded that Yadav students have better achievement than Dalit students. And concluded that the Private school students have better achievement than Public school students.

Recommendation for Further Study

The finding of this study should that the students of different cast groups of identity perform differently on SLC level examination. On the basis of above finding and conclusion, the researcher would like to suggest some recommendation for the educational implication and further study.

)   The similar study could be conducted at all level of school.

)   Teacher should be provided adequate instructional material and incentive involving them in decision process, training, workshops and seminars.

)   The special attention should be paid to ensure the effective teaching learning technique for mathematics on public school students.

- Public school should be providing better environment for Dalit students.

- There should be provided adequate teaching materials and training for teacher.

- There should be effective mechanism at the district level supervise the instructional process as well as output of the schools to ensure the quality education in each school particularly in public schools.

- The present study was limited to Brahmin, Yadav, hah and Dalit students of Dhanusha District. Similarly studies may be done with other groups.

- It is recommended to carry out the study why the students have low achievement and high achievement in mathematics.

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APPENDIX I

Statistical formula used for analysis and interpretation

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

Where $\bar{X}$ = Arithmetic mean

X = Sum of Obtained Score

N = Number of Students

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

Where σ = Standard deviation

N = Number of items

$$t = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{S_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where $S_p^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$

$n_1 + n_2 - 2$ degree of freedom. The quantity S_p^2 is called pooled sample variance and the value of σ can be estimated by pooling the sample variance.

Degree of freedom $= n_1 + n_2 - 2$

$\bar{X}_1$ = Mean Achievement of first sample group.

$\bar{X}_2$ = Mean Achievement of second sample group.

n_1 = Sample size of first sample group.

n_2 = Sample size of second sample group.

s_1^2 = The variance of first sample.

s_2^2 = The variance of second sample.

$s^2{}_p$ = The pooled sample variance.

Sample distribution of Mathematics Achievement Score

Public school				Private school			
Dalit	**Yadav**	**Sah**	**Brahmin**	**Dalit**	**Yadav**	**Sah**	**Brahmin**
33	19	51	23	56	80	68	70
50	41	47	34	61	13	32	25
17	39	23	59	34	51	56	59
45	27	71	40	25	59	40	66
56	26	37	59	56	66	19	78
22	48	18	26	77	95	50	56
55	15	76	37	68	44	70	22
60	74	64	50	30	52	68	49
51	22	22	55	19	25	32	55
42	40	20	51	61	69	56	74
33	26	40	71	70	80	40	77
19	50	38	32	91	38	50	35
50	38	50	15	85	40	77	56
61	23	61	75	44	20	68	65
24	19	80	61	38	19	66	70
58	15	75	62	57	50	32	55
42	30	35	38	20	70	56	25
38	43	32	25	66	91	20	48
30	57	56	47	57	95	50	20
40	75	70	59	50	80	71	55
45	33	29	47	69	77	12	67
49	25	18	53	75	66	45	18
27	46	44	20	79	70	78	40
55	48	30	30	53	50	90	20
25	30	19	13	48	60	49	67
41	38	49	20	21	35	59	77
35	15	57	50	17	55	63	55
29	49	38	61	30	40	36	58

Public school				Private school			
Dalit	**Yadav**	**Sah**	**Brahmin**	**Dalit**	**Yadav**	**Sah**	**Brahmin**
27	22	32	40	59	70	77	48
57	38	30	46	66	18	12	68
58	57	50	35	80	39	38	25
48	66	61	25	38	85	53	30
44	71	20	18	30	95	52	12
38	22	55	49	59	77	42	45
33	14	38	61	66	51	22	71
20	30	32	33	80	19	15	18
19	44	30	55		12	51	40
18	22	50	49		63	71	20
40	38	61	61		40	65	67
10	57	20	22		30	74	77
13	82	55	14		18	95	22
70	30	38	20		40	80	36
22	29	35	30		20	90	65
40	50	33	48		67	67	48
41	57	40	49		77	51	87
10	46	17	51		55	12	66
39	39	47	35		58	20	95
70	38	56	45		48	40	25
22	32	60	63		68	21	47
22	38	35	35		25	23	58
40	82	33	70		30	56	65
41	30	49	19		12	50	84
10	18	15	48		45	45	51
39	60	35	63		71	78	0
20	30	49	38		40	12	22
42	45	52	40			15	12
15	76	37	20			33	10
75	28	66	19			25	20

Public school				Private school			
Dalit	Yadav	Sah	Brahmin	Dalit	Yadav	Sah	Brahmin
23	91	15	50			68	66
40	82	75	70			46	37
20	30	17	91			45	19
42	29	55	95			88	91
	50	35	80			30	
	57	38	77			62	
	46	38	66			62	
	39	55	70				
	38	51	45				
	32	33	47				
	4	71					
	50	57					
	35	44					
	33	17					
	17						
	47						
	56						
	60						
	70						
	22						
	40						
	10						
	39						
	48						
	19						