Chapter I

INTRODUCTION

Background of the Study

The grading system was started from Yale University in 1785 A.D. In the world different university, colleges, schools have practiced and implemented grading system. Similarly, SSARC countries India, Srilanka, Pakistan have adopted grading system in school and colleges.

In Nepal Tribhuvan University, Kathmandu University, Far West University and Pokhara University have practiced, letter grading system in some faculty and school. Tribhuvan University has run semester system in master's level in university campus, Kirtipur and is practicing letter grading evaluation system instead of numbering system from academic session 2070-71 and is implemented overall valley from academic session 2073-74. Similarly, Continuous Evaluation System (CAS) and Liberal Promotion Policy (LPP) is implemented at primary level and basic school level.

In Nepal, SLC board was established in 1990 BS from established the evaluation process was applying numeric system longtime. In this numeric system the students either passes or fail according to their obtained marks. In this system, there are so many problem when SLC result published every year some students commit suicide, get frustrated become druggists and go negative path in life because of the failure in examination. Some people say SLC examination is a 'Iron gate' and it is difficult to pass but some other people says SLC is 'Golden gate' and it is an opportunity to go to new academic field and gives chances to make student's life brighter successful.

According to office of the controller of education report and ministry of education the result of SLC is worsening. In percentage of pass students is not increasing as expected although government forms many committees to study the reasons, also the result of mathematics is very poor. There have been occurred a lots of reforms and chances in curriculum but comparatively less attempts for reform in evaluation system in secondary level. As a result, Ministry of Education (MOE) and Curriculum Development Centre (CDC) have planned to change the existing evaluation system. Many committees and commission have presented suggestion and recommendations to the government to change the evaluation system and overall curriculum. Before 2063 the question have been asked from grade IX and X. After 2063 questions have been asked from grade X only but the result of SLC is not improved.

Finally, curriculum development Centre (CDC) has been prepared the grading system and passed National Curriculum Development and Evaluation Council (NCDEC) and Implemented Ministry of Education (MOE) on technical and vocational school in 2071 and overall country from 2072. The letter grading system of this new evaluation process see on appendix H.

There is no any explanation about pass or fail but instead of this subject wise grade and overall grade is given in the mark sheet. Those students who get D grade or below D grade in any subject can get chance to upgrade their grade in two subject according to their interest. For this purpose grade improve examinations are held after about one month. Those students who cannot get D+ or above in grade improve exams and if they want to upgrade their grade, they can get chance to involve in next year but they have to give the exams of all subjects.

There are different conditions to study different subjects in grade XI which which can see on appendix I.

Statement of the Problem

The letter grading system is new evaluation process on SEE. The three batches of SEE have passed on letter grading system. The effectiveness of this programmed depends upon-different conditions like curriculum, course coverage in allocated time, regularity of classes, availability of information resources to students, political disturbances, effective teaching method and trained teacher etc. Above components play an important role for making grading successful. Being a good system the different issues have been raised among stakeholders. The main people involve in LGS system are teachers and students. Till now teachers and students are also confused in LGS. Some teachers and students do not calculate GPA accurately they compare LGS with numeric system. There is no study on letter grading system on SEE regarding the mathematics teachers and students attitude. In this sense, the researcher wants to study the attitude of mathematics teachers and students towards letter grading system in SEE. So the study dealt with the following research questions.

- What are the attitudes of mathematics teachers towards letter grading system in SEE ?

- What are the attitudes of students towards letter grading system in SEE ?

- If there any significant different between a attitudes of mathematics teachers and students towards letter grading system ?

Objective of the Study

To complete the research the researcher took the objectives which are as follows:

- To find the attitudes of mathematics teachers towards letter grading system in SEE.

- To find the attitudes of students towards letter grading system in SEE.

- To compare the attitudes of mathematics teachers and students towards letter grading system in SEE.

Significance of the Study

LGS is recent phenomenon for evaluation of student achievement. Numerical grading system was not useful for evaluation of student's intelligence, LGS is most useful in evaluation of student intelligence, which describes student intelligence in the level, interval, or range. Also this study has the following significances.

- The study would be helpful to investigate mathematics teachers and student's attitudes towards letter grading system in SEE.

- It would help to improve the teaching learning situations in the context of attitudes towards letters grading system in SEE.

- It accounts the merits of new letter grading system.

- The findings of the study would be represented the whole nation so it could help the whole country for policy making and its implementation.

Statistical Hypothesis

$H_0 : \mu_1 = \mu_2$ (There is no significant difference between the attitude of students and teachers towards LGS)

$H_1 : \mu_1 \neq \mu_2$ (There is a significant difference between the attitude of students and teachers towards LGS)

Delimitations of the Study

Delimitations are those characteristics that limit the scope and define the boundaries of study. Due to certain time, expenses and other related factors the

researcher cannot overcome the entire field. So this study intended to study the attitude of mathematics teachers and students. It's limitations are as follows :

- This study was conducted only in secondary level mathematics teachers and students (that passed SEE)

- This study was conducted only in Dhading district.

- Only 15 schools were selected from which 15 mathematics teachers and 225 students were selected. (15 schools were selected from one municipality and two rural municipality)

- This study was limited to the information of mathematics teacher and students not of other like parents.

Definition of Key Terms

- **Letter Grading System**: A measurement and evaluation system which was implemented from 2071 B.S. in TSLC and all over the nation from 2072 B.S. In this system nobody fails and appropriate grade is given instead of pass, fail, percentage, division.

Attitude : Attitude is a personal view of mathematics teachers and students about letter grading system on the basis of their experience and pre-knowledge.

Teacher : The person who had been involved in teaching mathematics in class X of academic year 2075 in Dhading district were consider as teacher.

Student : The students who are studying in class XI in academic year 2075 in Dhading district are considered.

Grade Point Average: Grade point average (GPA) is an average performance of student.

Chapter II

REVIEW OF RELATED LITERATURES

Scientific research must be based on past knowledge. Review of related literature is a summary of writings of recognized authorities. It provides evidence that the researcher is familiar with what is already known and what is still unknown and unstated. Because effective research is based on past knowledge, this step helps to eliminate the duplication of what has been done and provides useful hypothesis and helpful suggestion for significant investigation. The review of related literature brings clarity and focus to our research problem, improves our methodology and problems our knowledge base. The empirical literature includes the different researches in the area of LGS.

Dancey, (1986) prepared a thesis on a topic "Assessment of teacher grading practices" for the degree of master of Arts from the university of British Columbia. The purpose of this study was to determine if letter grades could be made more reliable by statistically balancing raw achievement score prior to aggregation for reporting purpose. This investigative study was designed to evaluate the grading methods used by 37 randomly selected elementary school teachers. Data were collected by questionnaire and rank a hypothetical set of raw achievement score. The ranking of the original aggregate scores were compared to those derived from the balanced aggregate scores using the spearman rank correlation coefficient. As a result, this approach to grading has often received criticism from those who question its reliability and usefulness.

Jeans, and Judith (1995), conducted their research "students attitude towards grades and evaluation on writing." They were administering to 181 students. This is a

quantitative research and χ^2-text was employed to find out the attitude of students. They found positive attitudes towards grades and evaluation on writing.

Likewise, Michaekudes and Krashner (2005), conducted their research entitled "Graduate students attitudes towards grading system." This study examined graduate students attitudes towards letter grading system and pass/fail grading system in the law school and the school of education in a selective university in the united states. 54 students completed a questionnaire on goal orientation amount of effort and stress in each of the two grading environment. Students reported higher orientation towards ability comparison and higher level of effort and stress in letter graded class.

Bailey, (2012) prepared a dissertation on the topic "The relationship between secondary school teacher perception of grading practices and secondary school teacher perceptions of student motivations" for the degree of doctor of education in educational leadership from university of Missouris-st. This quantitative study examined the relationship between secondary school teacher perceptions of grading practices and secondary school teacher perception of student's motivation, by using data from two instruments, TPGP questionnaire and PSM questionnaire. Results indicate descriptive statistic regarding ANOVA. This study focused on 307 secondary school teachers in four mid-west countries. Result indicated statistically significant difference in mean score of perception between genders, experience levels and subject area taught for both grading practice and student motivation.

Wiles, (2013) prepared a dissertation on degree of doctor of education on the topic, "A quantitative study exploring grading and assessment practice in the middle school environment." from North west Nazarene University. The purpose of this study was to analyze the perceptions of grading and assessment practices and the impact of increasing opportunities for professional development in grading and assessment

practices for middle school teachers. He prepared a quantitative study with pre-survey and post-survey at FRMS teacher staffs. For survey prepare 23 questions on different level and field with Likert-scale. The non-parametric test Mann-Whitney U test is administrated to evaluate difference between pre-survey and post- survey. The collected data will be also analyzed by histogram in each question with obtaining percent. The final summary of results points to the constructive potential for the impact professional development has on the perceptions and eventual practice of educators.

Hasan and Mozammi (2016), prepared a journal entitled "Continuous and comprehensive evaluation in secondary school." Awareness and problems of students. This study was designed to assess the awareness and explore the problems of students" regarding continuous and comprehensive evaluation. The sample of the study consists 120 students drawn from four CBSE affiliated secondary schools located at Bishalpur and Raipur district of Chattisgarh through purposive sampling techniques, semi structured interview were conducted to collected data. Through this tool the researcher found that the majority of student perceived CCE better evaluation system than previous evaluation system.

Paneru, (2016) prepared a master thesis on the topic "Letter grading system : perceptual difference and student motivation to learn mathematics" (a case study). This case study about LGS in order to explore perceptual similarly and difference among mathematics teachers, students, parents in relation to improve student mathematics achievement and its effect on student motivation to learn mathematics at secondary school. In the research, researcher made 49 groups of students including purposively at students in each group from one private and one public school. There were 37 students who were evaluated through letter grading system in TSLC

examination in that year. 40 students are studying in the technical and vocational stream and 45 students are studying in general steam in this year. The collected information analyzed qualitatively and connected with Maslow's Hierarchy of Need theory and Holland theory of carrier choice. The result of the study showed that there was common and positive perception among respondents regarding LGS.

In this way the above presented researchers were carried in order to know attitude of university level students and teachers towards grading system. Besides them Balley, Hasan and Paneru had researched on the secondary level. However, the concept of university level students and school level students may be different. So, my research is based on the attitude of SEE students and teacher towards grading system. This research is quite different than other researches because through this research I was found the both perspectives from student side and teacher's side regarding this grading system. Moreover, this research was fond the attitude of school level teachers and students towards the implementation of LGS, attitude towards output of students and educational management in LGS.

Conceptual Framework of the Study

A conceptual framework is presented either in graphical or narrative forms, which depicts the relation between the variables, brings clarify, focus to see and organize the research questions more clearly. From the above review of literature the research has come to the point that the topic of current research attitude of public school students and teacher at secondary level. The above mentioned literature has helped the researcher to save the research and draw meaningful conclusion. The following conceptual framework was constructed with the help of above mentioned literature review.

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┌─────────────────────┐                              ┌─────────────────────┐
│   Attitudes towards │                              │   Attitudes towards │
│     LGS system      │                              │ implementations of LGS│
└─────────────────────┘                              └─────────────────────┘
              ↖                                      ↗
                      ┌─────────────────┐
                      │  Letter grading │
                      │     system      │
                      └─────────────────┘
              ↙                                      ↘
┌─────────────────────┐                              ┌─────────────────────┐
│   Attitudes towards │                              │   Attitudes towards │
│ educational management│                            │  output of students │
└─────────────────────┘                              └─────────────────────┘
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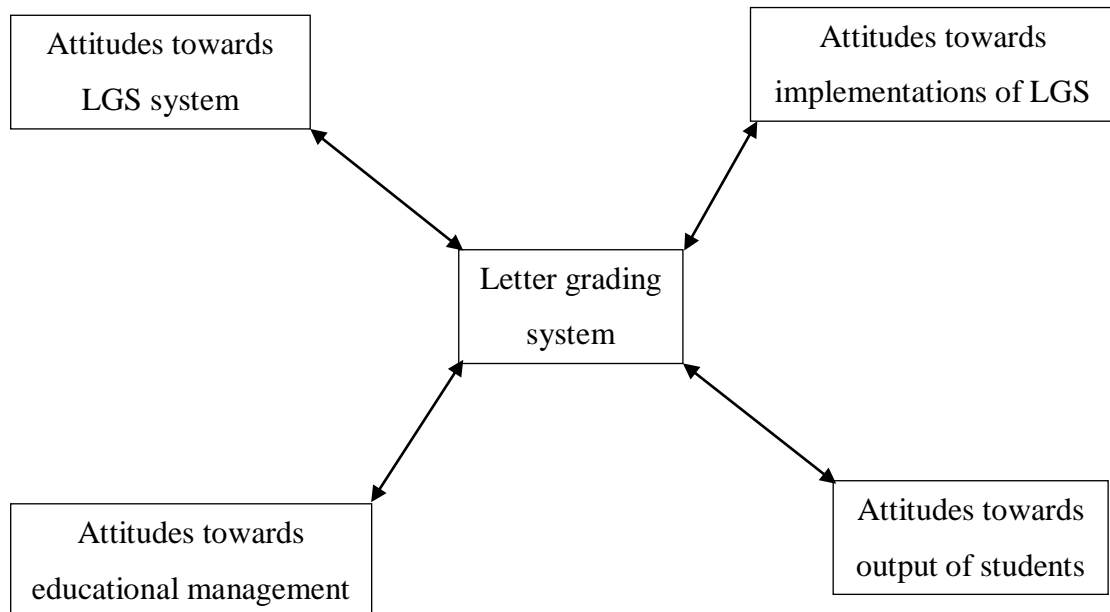
Fig: Conceptual framework

Source: Michalis Michaelidies and Krashner (2005)

The above diagram relates to the students and teachers attitude towards knowledge of LGS, implementation, management and output of students in LGS. The attitude of students and teachers are quite different towards LGS. So the researcher is intended to find out the attitude of secondary level students and mathematics teachers towards grading system based on the above conceptual framework. Researcher used questionnaire to investigate respondents' attitude towards letter grading system in SEE. For the questionnaire 30 statements were prepared for students and 20 statement were for mathematics teachers based on the above main theme of conceptual framework and adopted from thesis on "Graduate students attitude towards grading system" by Michalis Michaelidies and Krashner (2005) and the help of experts.

Chapter III

METHODS AND PROCEDURES

This chapter presents the methods and procedure of the study, which is carrying out to achieve. The objectives of the study and to get the answer of the statement of the problem. We describe in this phase design and method of the study, population of the study, sample of the study, data collection tools reliability and validity of the tool and data analysis procedure.

Research Design

This study was based on survey research design. The survey was conducted on 15 secondary schools mathematics teachers and students from selected school. The data was collect through primary sources. The primary data was collected through questionnaire from mathematics teachers and students and interview was collect from mathematics teachers only towards LGS in SEE. Questionnaire was constructed to get attitude about letter grading system and interview guidelines were construct to get personal belief, views, attitude towards knowledge of LGS, implementation, management and output of students in LGS and to make a theme. The nature of the study is quantitative and qualitative.

Population of the Study

This study was conducted for the purpose of finding the mathematics teachers and students attitude towards LGS in SEE. Thus all mathematics teachers and students of Dhading district are the population for this study.

Sample of the Study

This study was conducted only in Dhading district. The total secondary schools were 115 in Dhading. Among them 15 secondary schools were selected as random sampling, 15 mathematics teachers and 225 students (students that passed

SEE) were selected from sampled schools. Therefore 15 secondary level mathematics teachers and 225 students were total sampled of this study

Tools for Data Collection

The data collection process was begun by using questionnaire, statements and interview. Data was collect to the survey on secondary level mathematics teachers and students perception, beliefs, and opinion about LGS.

Questionnaire

The researcher visited the sample school to collect data by questionnaire for letter grading system. For the questionnaire, 30 statement were prepared for students and 20 statement were prepared for mathematics teachers based on the above main theme of conceptual framework and adopted from thesis on "Graduate student's attitudes towards grading system" by Michalis Michaelides and Krashner (2005) and the help of experts. It was developed and constituted under the guidance of supervisor. Which consists of 30 statement has five options strongly agree, agree, undecided, disagree and strongly disagree for each item. These questionnaires consists different aspects of letter grading system, educational management implementations of letter grading system and students output in letter grading system. Scale of scoring each item of the questionnaire used the Likert five point scales. The value of five strongly agree, four for agree, three for undecided, two for disagree and one for strongly disagree and for negative statement the value of one strongly agree, two for agree, three four undecided four for disagree and five for strongly disagree.

Interview

Interviews are also referred as an oral questionnaire by some people on which data is collected directly from other in face to face contact. Interview is the most commonly used method for collecting primary data. Interview express the internal

thought, interest, personal thinking and opinion. It is a tool to find out person experience expresses, internal thought of person according to their acting, looking and facial expression. Interview guidelines were developed as given in Appendix-F. The interview was taken from six mathematics teachers to explore the attitudes towards LGS in SEE and to develop a theme. The interview totally consist on interview guidelines about LGS in SEE.

Data Collection and Tabulation Procedure

The researcher visits the sample school with structural questionnaire for the data collection. The researcher took the permission of head teacher and class teacher in the previous day. After that the researcher distributed questionnaire to 15 mathematics teachers and 225 students to collect the data about LGS in SEE. After getting response of all students and teachers the questionnaire was taken back with thanks. Interview was taken only six teacher based on the interview guideline. Each statement was followed through each aspect by the rank responses in five point Likert-scales. Finally the collected data was tabulated.

Reliability and Validity of Tools

For the reliability of the instruments, a pilot study was conducted to assess the reliability of this tools or instruments. The pilot study was carried out of twenty students, which were not included in the study. The obtained data were calculated using by split-half method, then reliability coefficient was found 0.84.

For the validation of the instruments, the researcher consulted with the thesis supervisor. The research tools used in this study were questionnaire. It also prepared by through the consultation with the expert. The statement was fixed for the final study. The statement was related to attitude towards letter grading system.

Data Analysis Procedure

The collected data was analysis through quantitatively as well as qualitatively. To analyzed the gathered information the researcher also used the weighted mean of each statement regarding the attitudes of mathematics teacher and students towards letter grading system, implementation of LGS, management in LGS and output of students in LGS was measured. The statistical device weighted mean was calculated by the sum of obtained points in each statements divided by total number of responded and compare with the weighted average mean. Each statement was studied in terms of mathematics teachers and students response. The researcher had made the criteria if the mean weighted score is greater or equal to three then the statement is favorable and if the mean weighted score is less than three the statement is non favorable. Also if student and mathematics teachers give agree response more than disagree response except undecided on any statements then they have positive attitudes that statements otherwise it is negative. By the help of t-test researcher compare the attitude of mathematics teachers and students at 0.05 level of significance. The data collected from interview was transcribed to develop the theme about knowledge of LGS, implementation management and output of students on LGS.

Chapter IV

ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the collected data. This research is a survey study about latest, contemporary and burning issue of letter grading system and objectives to find out attitude of students and mathematics teachers towards letter grading system in SEE. To meet the objectives of the study the researcher collected data from randomly selected 15 government secondary schools from one municipality (Nilkantha municipality) and two rural municipalities (Khaniyabas and Rubivalley) of Dhading district. 15 students and 1 mathematics teacher selected per schools. Data were collected through attitude scale and interview guideline. The researcher collected interview of mathematics teachers from in mobile phone and also noted in field note based on interview guideline. The data were firstly transcribed in Nepali language then translated in English. After that, the result of the collected data was analyzed in the topics knowledge of letter grading system implementation management and output of letter grading system.

Students attitude towards the Knowledge of Letter Grading System

There are ten statements related to the knowledge of letter grading system. The following table consist the students attitude towards knowledge of letter grading system and it's corresponding weighted mean of each statement related to letter grading system in SEE.

Table 1 : Weighted mean of students towards knowledge of LGS

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean	Result
1	I understand about letter grading system	75	480	105	52	39	751	3.33	F
2	Letter grading system is better than percentage and numerical system	225	140	150	110	40	665	2.95	NF
3	Letter grading system essential for SEE level	220	200	93	90	55	658	2.92	NF
4	Letter grading system motivates weak students.	400	240	120	40	25	825	3.66	F
5	I prefer letter grading system to be numbering system in higher education	150	240	90	100	55	635	2.82	NF
6	The letter grading system reduced the subjective biasness in evaluation	230	168	114	66	66	644	2.86	NF
7	All subjects are equally important in letter grading system	185	216	126	64	60	651	2.89	NF
8	I would like to learn more about LGS	155	172	195	90	41	653	2.90	NF
9	None of the students fails in LGS	300	216	87	90	37	730	3.24	F
10	I understand how giving letter grades and calculating and giving GPA	360	232	78	80	29	779	3.46	F

F- stand for favorable and NF - stand for non-favorable

From the above table- 1 four statements out of ten statements were favorable with weighted mean more than three and six statements out of ten statements were non-favorable with weighted mean less than three. The average weighted mean of students responded towards knowledge of letter grading system was 3.10. Then table-1 also shows that four statements out of ten statement were above the average weighted mean and six were below the average weighted mean. In concludes that there were less number of students positive towards knowledge of LGS. It seems that letter grading system is not different than percentage and numerical system. Students wants to grading system is essential for better result of SEE students, students were favor on the statements letter grading system motivates to weak students' because without getting minimum grade D+ in science, math and English they can admit in class eleven. They wants LGS is necessary is higher level education.

From above it can be said that students have positive attitude towards LGS. They also want to avoid the misunderstanding and misconcepts about LGS from the side of government. It is also concluded that till now students, teachers and parents are in confusion and not clear about the concept of LGS. So the concept should be clarified from the side of the examination controller board.

Attitudes of Students towards the Implementation of Letter Grading System

There were five statement related to the students attitude towards the implementation of letter grading system. The following table consist the students attitude towards the implementation of LGS and it's corresponding weighted mean of each statement.

Table 2 : Weighted mean of students towards implementation of LGS

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean	Result
11	Sufficient curriculum will be change for using LGS in school level.	280	312	153	56	12	813	3.61	F
12	Letter grading system helps to choice of field for further study.	235	172	111	102	47	667	2.96	NF
13	In letter grading system the assessment and overall evaluation is transparent.	180	172	186	104	32	674	3.1	F
14	Course can be completed within the allocated time.	215	208	126	90	43	682	3.04	F
15	Present curriculum is effective for letter grading system.	200	124	114	84	55	577	2.56	NF

F- stand for favorable and NF - stand for non-favorable

From the above table- 2 shows that three statements out of five statements were favorable with weighted mean more than three and two statements out of five were non favorable with weighted mean less than three. The average weighted mean of students responded towards implementation of letter grading system was 3.05. The table- 2 also shows that two statements out of five were above the average weighted mean and three statements out of five were below the average weighted mean. From this it conclude that students were positive towards the implementation of letter grading system.

After analyzing above it can be said that students were satisfied towards the implementation of LGS. Because they can choose the field for further study according to obtained GPA. They were not satisfied on the present curriculum, because present curriculum is based on number grading system. The evaluation process of LGS is same as numbering system. Students were agreed on students fail in LGS, was not true at all because all were not accept in all sectors. Re-test is true for increasing grade, who get low grade.Course can be completed within the allocated time is true. Because when we complete the course in allocated time then students get good GPA and get acceptance in all sector. Sufficient curriculum will be change for using LGS in school level is true. Because the curriculum do not matched with vertically

Table 3 : Weighted mean of students towards the educational management in letter grading system

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean	Result
16	Teaching learning activities are more effective in letter grading system	200	240	174	108	13	735	3.26	F
17	Do you fell the environment of classroom is more competitive	210	300	156	74	19	759	3.37	F
18	Classroom is effective in letter grading system	150	180	105	100	65	600	2.66	NF
19	Letter grading system is motivated to students for more practices	300	280	120	44	33	777	3.45	F
20	Impact of letter grading system in mathematics class is more effectiveness	300	268	129	46	32	775	3.44	F
21	Practices of letter grading system in internal examination of school	315	92	126	124	35	692	3.07	F
22	Students are made examination oriented in letter grading system than numbering system	180	252	126	96	36	690	3.06	F
23	Ratio of students and infrastructure in the classroom are appropriate	200	148	126	76	68	615	2.73	NF

F- stand for favorable and NF - stand for non-favorable

From the above table- 3 shows that six statements out of eight statements were favorable with weighted mean more than three and two statements out of eight were non-favorable with weighted mean less than three. The average weighted mean of students responded towards educational management in letter grading system was 3.13. Then table-3 also shows that four statements out of eight were above the average weighted mean and four statements out of eight were below the average weighted mean. It concludes that students were positive towards the educational management in LGS.

From above it can be said that students are positive towards the management in LGS. Because they were feel good environment in LGS. Ratio of students and infrastructure were managed in the classroom. Training and orientation programs were not sufficient for well management in LGS. LGS is also need in internal evaluation. The mathematics teachers responsibility and duty was increase after using LGS. Letter Grading system was not used in internal evaluation and it is also need in internal evaluation for the better outcomes of learning achievement.

Attitudes of Students towards Output in Letter Grading System

There were seven statements related to the attitude of students towards output in LGS. The following table consist the students attitude towards output in LGS and it's corresponding weighted mean of each statement related to letter grading system in SEE.

Table 4 : Weighted mean of students towards output in letter grading system

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean	Result
24	The average learning achievement is increased after the use of LGS	130	148	156	116	52	602	2.67	NF
25	You are motivated in learning activities by LGS	195	292	138	102	16	743	3.30	F
26	The letter grading system is contributive to increase necessary competencies on students	175	232	225	64	25	721	3.20	F
27	Letter grading system helps to identify the ability of students	310	108	132	106	39	695	3.08	F
28	LGS is decreasing the dropout students.	160	220	105	90	58	633	2.81	NF
29	Teachers has better understanding of his teaching using LGS	175	168	144	116	42	645	2.86	NF
30	Teachers provide regular feedback on students, assignment, examination and reduce their negative wash back effect	175	428	108	54	20	785	3.48	F

F- stand for favorable and NF - stand for non-favorable

From the above table- 4 shows that four statements out of seven were favorable with weighted mean more than three and three statements out of seven were unfavorable with weighted mean less than three. The average weighted mean of students responded towards output of students in letter grading system was 3.05. Then table- 4 also shows that four statements out of seven were above the average weighted mean and three were below the average weighted mean. It concludes that students were positive about output in LGS.

From the above analysis, it can be concluded that LGS has played positive role in order to decrease dropout rate in school education. The number of enrolled students is also increased. But they are disagreed with the system and mode of examination because they have concluded that only written examination can not evaluate and cover whole aspects and abilities of the students. Students are positive on teacher's responsibility and duty after using LGS.

Mathematics teacher attitude towards knowledge of letter grading system

There were seven statements related to knowledge of letter grading system. The following table consist the teacher's attitude towards knowledge of letter grading system and it's corresponding weighted mean of each statement related to letter grading system in SEE.

Table 5: Weighted mean of mathematics teachers attitude towards knowledge of LGS

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean	Result
1	The concept of letter grading system and grade point average is familiar for me	30	20	0	2	3	55	3.66	F
2	All subjects are equally important in letter grading	15	16	9	4	3	47	3.13	F
3	LGS has positive effect in students academic achievement	15	20	9	4	2	50	3.33	F
4	Letter grading system is better than percentage and numerical system	20	12	12	2	3	49	3.26	F
5	Letter grading system is essential for SEE level	30	8	0	0	7	45	3	F
6	LGS is usefulness for evaluation in existing school curriculum	30	8	12	2	2	54	3.6	F
7	High grades can motivate student to learn	30	16	9	0	2	57	3.8	F

From the above table-5 shows that seven statements out of seven were favorable with weighted mean more than three. The average weighted mean of mathematics teachers responded towards knowledge of LGS was 3.39. Then table-5 also shows that three statements out of seven were above the average weighted mean and four were below the average weighted mean. It concludes that teachers were positive towards the knowledge of LGS.

To verify this result the researcher conducted an interview with two mathematics teachers towards the knowledge of letter grading system. Interview with teacher A : Teacher A was a secondary level mathematics teacher. He was 29 years old and 4 years secondary level mathematics subject teaching experience. His qualification was B.Ed. in mathematics education. He said that :

I have much knowledge about LGS. It is a system of measurement and evaluation. In this system marks are not given in particular subject but students achievement is categorized in letter on the basis of some determined norms. Letter grading system was first used from 2071 BS in TSLC and from 2072 it was applied in general LSC as well. In grade sheet only grade is given rather than percentage and division. Student achievement is by multiplying the highest level 0.04 with student achieved marks. In letter grading system no student's is considered as failed. At least whole GPA is determined on the basis of the grade point of whole subject. This system is better than percentage and numerical system.

He was a teacher of secondary level mathematics subject. He was understands and also calculate LGS and GPA. He said it is also need in internal evaluation. Responsibility, duty, continuity in study, studying habit and interest were decreased

from the misunderstanding about LGS. LGS is for using SEE evaluation. Thus he had positive opinion towards LGS.

Interview with teacher B :

LGS is new and latest concept of evaluation system. LGS applied on technical stream from 2071 and general stream 2072. I am positive about LGS and government should be clarified and avoid the misunderstanding and misconceptions about LGS among teachers, students parents and other stakeholders. LGS has positive effect on student's achievement and it is an important for evaluation. The talented students are getting good grade and GPA in their examinations and less talented students are getting low grade and GPA. The grades are depending on students writing, thinking and learning ability.

He had positive opinion towards LGS. He said it was useful for only educated family because they understand about it. LGS was newly use in student evaluation, therefore it was difficult to understand. Difficult to know accurate score in LGS. Low grade achieves were not get opportunities in so many fields. Although if we aware LGS is usefulness for students evaluation.

From this, it can be said that teachers have positive attitude towards LGS. They also want to avoid the misunderstanding and misconcepts about LGS from the side of the government especially the ministry of education and department of education from the above view, it can be said that those students who are good at study are getting better grade and GPA but those students are less talented are getting low grade and GPA.

It is also concluded that till now student's, teachers and parents are in confusion and not clear about the concept of LGS. So the concept should be clarified from the side of the examination controller board or related authorities. Finally they

have concluded that LGS has positive effect on students achievement and it is very much important for evaluation as well.

Teachers attitudes towards implementation of letter grading system

There were seven statement related towards implementation of letter grading system. The following table consist the teachers attitudes towards implementation of LGS and it's corresponding weighted mean of each statement related to letter grading system in SEE.

Table 6:Weighted mean of teachers towards implementation of LGS

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean	Result
8	Present curriculum is effective for LGS	15	12	9	6	3	45	3	F
9	Teachers students and parents are satisfied about the use of LGS	10	12	12	6	3	43	2.86	NF
10	There are clear guidelines to implement letter grading system	15	12	9	6	3	45	3	F
11	The course can be completed with in allocated time	30	16	0	6	2	54	3.6	F
12	There are challenges to implement the letter grading system	20	8	12	10	0	50	3.33	F
13	In letter grading system, the assessment and overall evaluation is transparent	20	8	15	8	0	51	3.4	F
14	We need learning material and equipment in letter grading system	20	8	18	2	2	50	3.33	F

From the above table- 6 shows that six statements out of seven were favorable with weighted mean more than three. The average weighted mean of mathematics teachers responded towards implementation of LGS was 3.20. Then table- 6 also shows that four statements out of seven were above the average weighted mean and three were below the average weighted mean. It concludes that teachers were positive towards the implementation of LGS.

To verify this result the researcher conducted an interview with mathematics teachers towards implementation of letter grading system. He said that :

Teachers, students and parents are not satisfied about the use of LGS. However some weak students may be satisfied because they can join in class eleven without getting minimum grade in math, English and science. If they get 1.6 in average, but parents and teachers are not satisfied because they have realized that students are not so serious in difficult subject. The present curriculum is not effective for letter grading system because it is based on number grading system. This curriculum can not meet the objective of LGS. I don't think, there are any guidelines to implement LGS because all students, parents and even teachers are also confused about it. When national examination board announces results it creates a kinds of confusion among the parents and student.

After analyzing above saying it can be said that teachers, students and parents are not satisfied with this LGS. Some weak students are satisfied because they can get chance to admit in grade eleven, if they can attain only 1.6 GPA though they are failed in English, math and science. The teachers have also raised questions regarding the implementations of LGS because they viewed that there is no any guidelines and because of this all are in confusion. They also talked about the curriculum as well and

concluded that the curriculum is not satisfactory for LGS because it is based on number grading system.

Attitudes of teacher towards the educational management

There were three statements related to the educational management in letter grading system. The following table consists the mathematics teachers attitude and it's corresponding weighted mean related to the letter grading system.

Table 7:Weighted mean mathematics teachers towards management of LGS

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean	Result
15	ICT facilities and audiovisual aids in the classroom are appropriate	20	12	12	2	3	49	3.26	F
16	Effective teacher training program are needed for LGs	25	16	3	4	3	51	3.4	F
17	Our mathematics content is suitable for letter grading system	20	8	15	8	0	51	3.4	F

From the above table- 7 shows that three statements out of three were favorable with weighted mean more than three. The average weighted mean of mathematics teachers responded towards educational management was 3.30. Then table- 7 also shows that two statements out of three were above the average weighted mean. It concludes that mathematics teachers positive towards educational management in LGS.

To verify this result the researcher conducted an interview with mathematics teachers towards educational management. He said that :

Letter grading system has not prescribed or recommended any new way concerning enhancement of student learning achievement. However, it has included extra classes for the student with poor learning performance and free availability of stationary materials for economically disabled students. It has also recommended the use of new relevant modern and effective teaching materials for effectiveness of teaching learning activity. Their is well management in classroom. Audio-visual material are also managed in our class. In order to make learning meaningful and goal oriented, teaching learning process should be make effective and well organized, so we managed teaching material, infrastructure and seminar hall for students and teachers.

After analyzing above well management is necessary for better outcomes. ICT facilities and audiovisual aids are necessary for effective teaching learning. Trained teacher and training are seems necessary to every schools.

Attitude of teachers towards output of students in letter grading system

There were three statements related towards output of students in letter grading system. The following table consists the mathematics teachers attitude and it's corresponding weighted mean related to the letter grading system.

Table 8:Weighted mean of mathematics teachers towards output in LGS

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean	Result
18	The letter grading system is contribute to increase necessary competencies on students	10	12	9	8	3	42	2.8	NF
19	Letter grading system helps to identify the ability of students	35	8	3	6	2	54	3.6	F
20	LGS is decreasing the dropout students	20	8	12	10	0	50	3.33	F

From the above table- 8 shows that two statements out of three were favorable with weighted mean more than three. The average weighted mean of mathematics teachers responded towards output of students in LGS was 3.24. Then from table-8also shows that two statements out of three were above the average weighted mean. This shows that teachers are positive towards the output of students in letter grading system. To verify this result the researcher conducted an interview with mathematics teachers towards attitude of teachers towards output in letter grading system. He said that :

I think only written examination can not cover and evaluate all abilities of the students, however, letter grading system allows the students to choose their desired field for further study considering GPA obtained in all subject. So, to some event, letter grading system can test the actual competencies of the students. It has played contributory role to bring down the increasing dropout rate in school education. The number of enrolled students has increased after the use of LGS.

From the above views, it can be concluded that LGS has played positive role in order to decrease dropout rate in school education. The number of enrolled students is also increased. But they are disagreed with the system and mode of examination because they have concluded that only written examination can not evaluate and cover whole aspects and abilities of the students. But the teachers have some positive attitudes as well because they have accepted that students can choose the field and subject according to GPA which is obtained in SEE.

Comparison the attitudes of teachers and students towards letter grading system

The second objective of the study was to compare the attitudes of secondary level students and mathematics teachers towards letter grading system. In order to achieve the objectives, the researcher analyzed, the data of teachers and students attitude distinctly which is presented below :

Comparison	Sample (N)	Mean	S.D.	d.f	t-value	Decision
Teachers	15	3.30	0.34	238	2.98	Significant
Students	225	3.10	0.28			

The analysis of the information mentioned in the above table represents there were 15 teachers and 225 students as sample. The grand mean response score of teachers is 3.30 and standard deviation 0.34. Similarly, the grand mean response score of students is 3.10 and standard deviation 0.28. The difference mean views score between these two groups is 0.20. The calculated t-value with respect to the difference of mean views score is 2.98, which is greater than tabulated t-value 1.96 at 0.05 level of significance. This shows that the calculated t-value is more than tabulated t-value; therefore, the research hypothesis is rejected. Thus it conclude that there is significant difference between the attitude of students and teachers towards LGS and teachers have more positive attitude than the students.

Chapter- V

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

This fifth and final chapter would include a summary and interpretation of the research finding of the study. Theoretical and practical implication, as well as recommendation for further research and conclusion will also be delineated.

Summary and Findings

This research was concerned about the opinion of secondary level mathematics teachers and students towards LGS and to explore the attitudes of mathematics teachers and students towards letter grading system in SEE. This study was survey research. The population of the study was consisted of all secondary level mathematics teachers and students that passed SEE in LGS of Dhading district. The researcher selected 15 schools randomly, 15 mathematics teachers and 225 students from the selected schools constituted the sample of the study from Dhading district.

A set of structured questionnaire was developed as a tool for collect data for the study. All questionnaire statements were related to LGS in SEE.The questionnaire statements were classified into : knowledge, implementation, management and outputs of students in LGS.

There were 20 questionnaire statements for sampled secondary level mathematics teachers and 30 statements for sampled students. The weighted mean was used to find out the attitude of mathematics teachers and students towards LGS in SEE and t-test at 0.05 level of significance was used to compare the attitudes of mathematics teachers and students. The collected data were analyzed by using the statistical tools, following were the major findings of this study.

- The average weighted mean of mathematics teachers was 3.30 and students was 3.10.

- 13 statements out of 30 statements were above the total grand weighted mean. Which was related to attitude of students.

- 13 statements out of 20 statements were above the total grand weighted mean. Which was related with attitudes of mathematics teachers.

- There was a positive attitude of secondary level mathematics teachers and students towards LGS in SEE.

- Secondary level mathematics teachers were understood and calculate and assigned accurately GPA and LGS.

- Training and orientation programs were not sufficient for understanding GPA and LGS.

- There was necessary of training, orientation programs to the teachers, parents and students to understand about LGS.

- LGS was not useful for existing curriculum; therefore sufficient curriculum will be change for using LGS.

- LGS was not used in internal evaluation and LGS was also need in internal evaluation.

- Letter grading system was different from numerical/percentage grading system.

- No student's fails in LGS, which is not true at all.

- Parents, teachers and students were not generally satisfied to using LGS because of misunderstanding about LGS.

- Students dropout rate were decreased in a school.

Conclusion

On the basis of findings of this study shows that there was a positive attitude of secondary level mathematics teachers and students towards LGS in SEE. Even though teachers, parents and students were generally not satisfied with LGS because most of the students, teachers and parents have misconceptions, misunderstanding and illusions about LGS due to the lack of knowledge and clear understanding about LGS. Therefore there is necessary to training, orientation programs to the teachers, parents and students to understand about GPA and LGS.Students dropout rate was decrease in school and weak student's were also get level clear certificate and only literacy rate is going to increased. From the above research the researcher found that the attitudes of secondary level students and mathematics teachers had positive towards letter grading system. Attitude of mathematics teachers is better than attitude of students towards letter grading system in secondary level.

Recommendations

Since the present study was limited in secondary school with in the Dhading district, so finding of the study can be generalized for the same district but it can't be generalized to all level and national wise. Due to the limited resources time etc. The researchers could not address all the aspects of this study. So, considering these limitations the following recommendation had been made.

- To establish the findings, similar study should be carried out regional and national level.

- The comparison between the attitudes of mathematics teachers and students can be conducted.

- The action research on the whole process of letter grading system can be conducted as one of the large scale researchers.

- The curriculum should be matched vertically.

- School should provide free extra classes for those students with low marks.

- It is recommended to study out the problem faced by the students in learning mathematics at secondary level.

- Training should be provided to all teachers and it should be more effective.

- Curriculum should address the historical background of each unit.

- Government should provide mathematical lab for every secondary level schools.

- The authority must address teachers' expectation in the implementation and guidelines of letter grading system.

Appendix- A

Questionnaire form

Dear students

As a student of Master Degree in Mathematics Education. I'm going to conduct a study on attitude of mathematics teachers and students towards letter grading system. This study is a part of the academic requirement for the Master Degree in Education. For this purpose I distribute 30 statements concerned with attitude please study the statement carefully and give your opinion by putting tick mark (√) on any one of the following three rating of each statement.

Personal Details

Name of the students: ....
Name of the school: ....
Address :...

1. Student towards knowledge of letter grading system

Q.N.	Statement	SA	A	U	DA	SDA
1	I understand about letter grading system					
2	Letter grading system is better than percentage and numerical system					
3	Letter grading system essential for SEE level					
4	Letter grading system motivates weak students.					
5	I prefer letter grading system to be numbering system in higher education					
6	The letter grading system reduced the subjective biasness in evaluation					
7	All subjects are equally important in letter grading system					
8	I would like to learn more about LGS					
9	None of the students fails in LGS					
10	I understand how giving letter grades and calculating and giving GPA					

2. Attitude of students towards the implementation of letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA
11	Sufficient curriculum will be change for using LGS in school level.					
12	Letter grading system helps to choice of field for further study.					
13	In letter grading system the assessment and overall evaluation is transparent.					
14	Course can be completed within the allocated time.					
15	Present curriculum is effective for letter grading system.					

3. Attitudes of students towards the educational management in letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA
16	Teaching learning activities are more effective in letter grading system					
17	Do you fell the environment of classroom is more competitive					
18	Classroom is effective in letter grading system					
19	Letter grading system is motivated to students for more practices					
20	Impact of letter grading system in mathematics class is more effectiveness					
21	Practices of letter grading system in internal examination of school					
22	Students are made examination oriented in letter grading system than numbering system					
23	Ratio of students and infrastructure in the classroom are appropriate					

4. Attitudes of students towards output in letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA
24	The average learning achievement is increased after the use of LGS					
25	You are motivated in learning activities by LGS					
26	The letter grading system is contributive to increase necessary competencies on students					
27	Letter grading system helps to identify the ability of students					
28	LGS is decreasing the dropout students.					
29	Teachers has better understanding of his teaching using LGS					
30	Teachers provide regular feedback on students, assignment, examination and reduce their negative wash back effect					

Appendix- B

Questionnaire form

Dear teachers,

As a student of Master Degree in Mathematics Education. I am going to conduct a study on attitude of mathematics teachers and students towards letter grading system. This study is a part of the academic requirement for the Master Degree in Education. For this purpose I distribute 20 statements concerned with attitude please study the statement carefully and give your opinion by putting tick mark (√) on any one of the following three rating of each statement.

Personal Details

> **Name of the teachers:** ....
>
> **Name of the school:** ....
>
> **Address** :..

1. Mathematics teacher's attitude towards knowledge of lettergrading system

Q.N.	Statement	SA	A	U	DA	SDA
1	The concept of letter grading system and grade point average is familiar for me					
2	All subjects are equally important in letter grading					
3	LGS has positive effect in students academic achievement					
4	Letter grading system is better than percentage and numerical system					
5	Letter grading system is essential for SEE level					
6	LGS is usefulness for evaluation in existing school curriculum					
7	High grades can motivate student to learn					

2. Teachers attitude towards the implementation of letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA
8	Present curriculum is effective for LGS					
9	Teachers students and parents are satisfied about the use of LGS					
10	There are clear guidelines to implement letter grading system					
11	The course can be completed with in allocated time					
12	There are challenges to implement the letter grading system					
13	In letter grading system, the assessment and overall evaluation is transparent					
14	We need learning material and equipment in letter grading sysem					

3. Attitude of teachers towards the educational management.

Q.N.	Statement	SA	A	U	DA	SDA
15	ICT facilities and audiovisual aids in the classroom are appropriate					
16	Effective teacher training program are needed for LGs					
17	Our mathematics content is suitable for letter grading system					

4. Attitude of teachers towards output of students in letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA
18	The letter grading system is contribute to increase necessary competencies on students					
19	Letter grading system helps to identify the ability of students					
20	LGs is decreasing the dropout students					

Appendix- C

Student's responses and weighted mean of responses

1. **Students attitude towards knowledge of letter grading system**

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean
1	I understand about letter grading system	75	480	105	52	39	751	3.33
2	Letter grading system is better than percentage and numerical system	225	140	150	110	40	665	2.95
3	Letter grading system essential for SEE level	220	200	93	90	55	658	2.92
4	Letter grading system motivates weak students.	400	240	120	40	25	825	3.66
5	I prefer letter grading system to be numbering system in higher education	150	240	90	100	55	635	2.82
6	The letter grading system reduced the subjective biasness in evaluation	230	168	114	66	66	644	2.86
7	All subjects are equally important in letter grading system	185	216	126	64	60	651	2.89
8	I would like to learn more about LGS	155	172	195	90	41	653	2.90
9	None of the students fails in LGS	300	216	87	90	37	730	3.24
10	I understand how giving letter grades and calculating and giving GPA	360	232	78	80	29	779	3.46

2. Attitudes of students towards the implementation of letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean
11	Sufficient curriculum will be change for using LGS in school level.	280	312	153	56	12	813	3.61
12	Letter grading system helps to choice of field for further study.	235	172	111	102	47	667	2.96
13	In letter grading system the assessment and overall evaluation is transparent.	180	172	186	104	32	674	3.1
14	Course can be completed within the allocated time.	215	208	126	90	43	682	3.04
15	Present curriculum is effective for letter grading system.	200	124	114	84	55	577	2.56

3. Attitude of students towards the education management in letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean
16	Teaching learning activities are more effective in letter grading system	200	240	174	108	13	735	3.26
17	Do you fell the environment of classroom is more competitive	210	300	156	74	19	759	3.37
18	Classroom is effective in letter grading system	150	180	105	100	65	600	2.66
19	Letter grading system is motivated to students for more practices	300	280	120	44	33	777	3.45
20	Impact of letter grading system in mathematics class is more effectiveness	300	268	129	46	32	775	3.44
21	Practices of letter grading system in internal examination of school	315	92	126	124	35	692	3.07
22	Students are made examination oriented in letter grading system than numbering system	180	252	126	96	36	690	3.06
23	Ratio of students and infrastructure in the classroom are appropriate	200	148	126	76	68	615	2.73

4. Attitudes of students towards output in letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean
24	The average learning achievement is increased after the use of LGS	130	148	156	116	52	602	2.67
25	You are motivated in learning activities by LGS	195	292	138	102	16	743	3.30
26	The letter grading system is contributive to increase necessary competencies on students	175	232	225	64	25	721	3.20
27	Letter grading system helps to identify the ability of students	310	108	132	106	39	695	3.08
28	LGS is decreasing the dropout students.	160	220	105	90	58	633	2.81
29	Teachers has better understanding of his teaching using LGS	175	168	144	116	42	645	2.86
30	Teachers provide regular feedback on students, assignment, examination and reduce their negative wash back effect	175	428	108	54	20	785	3.48

Appendix- D

Teacher's responses and weighted mean of responses

1. Mathematics teacher's attitude towards knowledge of letter grading system.

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean
1	The concept of letter grading system and grade point average is familiar for me	30	20	0	2	3	55	3.66
2	All subjects are equally important in letter grading	15	16	9	4	3	47	3.13
3	LGS has positive effect in students academic achievement	15	20	9	4	2	50	3.33
4	Letter grading system is better than percentage and numerical system	20	12	12	2	3	49	3.26
5	Letter grading system is essential for SEE level	30	8	0	0	7	45	3
6	LGS is usefulness for evaluation in existing school curriculum	30	8	12	2	2	54	3.6
7	High grades can motivate student to learn	30	16	9	0	2	57	3.8

2. Teacher's attitudes towards the implementation of letter grading system

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean
8	Present curriculum is effective for LGS	15	12	9	6	3	45	3
9	Teachers students and parents are satisfied about the use of LGS	10	12	12	6	3	43	2.86
10	There are clear guidelines to implement letter grading system	15	12	9	6	3	45	3
11	The course can be completed with in allocated time	30	16	0	6	2	54	3.6
12	There are challenges to implement the letter grading system	20	8	12	10	0	50	3.33
13	In letter grading system, the assessment and overall evaluation is transparent	20	8	15	8	0	51	3.4
14	We need learning material and equipment in letter grading system	20	8	18	2	2	50	3.33

3. Attitudes of teachers towards the educational management

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean
15	ICT facilities and audiovisual aids in the classroom are appropriate	20	12	12	2	3	49	3.26
16	Effective teacher training program are needed for LGs	25	16	3	4	3	51	3.4
17	Our mathematics content is suitable for letter grading system	20	8	15	8	0	51	3.4

8. Attitudes of teachers towards output of students in letter grading system

Q.N.	Statement	SA	A	U	DA	SDA	Total	Weighted mean
18	The letter grading system is contribute to increase necessary competencies on students	10	12	9	8	3	42	2.8
19	Letter grading system helps to identify the ability of students	35	8	3	6	2	54	3.6
20	LGs is decreasing the dropout students	20	8	12	10	0	50	3.33

Appendix - E

Name of the School

1.   Shree Singladebi Secondary School, Khaniyabas Jharlang

2.   Shree Jharlang Secondary School, Jharlang

3.   Shree Sattedebi Secondary School, Sattedbei

4.   Shree Mukrapdebi Secondary School, Borang

5.   Shree Lapa Secondary School, Lapa, Rubivalley

6.   Shree Ganeshkund Secondary School, Khaniyabas

7.   Shree Ganeshpur Secondary School, Rubivalley

8.   Shree Shaheed Smrity Secondary School, Khaniyabas- 4

9.   Shree Bhagawati Himalayan Secondary School, Khaniyabas- 5

10.   Shree Navajagriti Chandi Secondary School, Nilkhant- 5

11.   Shree Janasakti Secondary School, Nilkhant- 6

12.   Shree Shiddasthani Secondary School, Nilkhant- 7

13.   Shree Rameshwory Secondary School, Nilkhant- 7

14.   Shree Ammar Jyoti Secondary School, Nilkhant- 8

15.   Shree Panchakanya Secondary School, Nilkhant Municipality- 1

Appendix- F

Interview guideline for mathematics teachers

Name :   Gender :

Address: Age :

Schools Name :

The interview to the teachers was taken of the following main guidelines :

1.   Understanding about GPA.

2.   Understanding about LGS.

3.   Perception/views about use of LGS in SLC.

4.   Implementation of LGS.

5.   Management in LGS

6.   Output of students in LGS

7.   Attitude on LGS.

8.   Opinions about no student fail in LGS.

9.   Problem face in using LGS

10.   Satisfaction to using LGS

Appendix- G

Statistical Formula Used for Data Analysis

i)   Mean $(\overline{X}) = \dfrac{\Sigma fx}{N}$

ii)   S.D. $= \sqrt{\dfrac{\Sigma(xi - \overline{x})^2}{N}}$

iii) $t = \dfrac{\overline{x_1} - \overline{x_2}}{S_P\sqrt{\dfrac{S_1^2}{N_1} + \dfrac{S_2^2}{N_2}}}$

Where,

$$S_p^2 = \dfrac{(N_1 - 1)\, S_1^2 + (N_2 - 1)\, S_2^2}{N_1 + N_2 - 2}$$

$$r_{oe} = r_{oe} = \dfrac{\Sigma xy}{\sqrt{\Sigma x^2} \times \sqrt{\Sigma y^2}}$$

Where, df $= N_1 + N_2 - 2$

$\overline{x}_1 =$ Mean of first sample

$\overline{x}_2 =$ Mean of second sample

$N_1 =$ No. of teachers

$N_2 =$ No. of students

$S_1^2 =$ Variance of first sample

$S_2^2 =$ Variance of second sample

Appendix-H

New evaluation process on LGS

S.N.	Score	Grade	Grade point	Descriptor
1	90-100	A+	4.0	Outstanding
2	80- below 90	A	3.6	Excellent
3	70- below 80	B+	3.2	Very good
4	60 - below 70	B	2.8	Good
5	50 - below 60	C+	2.4	Above average
6	40 - below 50	C	2.0	Average
7	30 - below 40	D+	1.6	Fair
8	20 - below 30	D	1.2	Not fair
9	10 - below 20	E	0.8	Insufficient

(Source :MoE, 2072)

Appendix-I

Different Conditions for Admit in Grade XI

Subjects	Minimum GPA and Grade
Science subject group: Physics/Chemistry/Biology/Mathematics/Computer Science	GPA 2 [Science and Math C+, English C, Social and Nepali D+]
Technical stream : Electric Engineer/Civil Engineer/Computer Engineer	GPA 1.6 [Science, Math and English C, Social, Nepali D+]
Math/Account, Economics/Computer Science/Teaching Mathematics/Element of Finance/Business Math/Business Studies/Co-operative Management/Geography/Psychology	GPA 1.6 [Math C, English, Nepali, Social, Science D+]
Physics Education/'Chemistry Education/ Biology Education/Teaching Science	GPA 1.6 [Science and Math C, English, Nepali and Social D+]
English/Alternative English/Linguistics/Teaching English	GPA 1.6 [English C, Nepali and Social D+]
Mass Communication/Hotel Management/Travel and Tourism	GPA 1.6 [English C, Nepali, Math and Social D+]
Nepali/Teaching Nepali	GPA 1.6 [Nepali C, English and Social D+]
Political Science/History/Culture/Home Science/Sociology/Philosophy Library Information Science	GPA 1.6 [Social C, Nepali and English D+]
Introduction to Education/Instructional Pedagogy/ Health Physical Education / Population Education/Environment Education	GPA 1.6 [Population /Health/Physical Education C, Nepali/English/Science D+]

(Source: MoE, 20 i

REFERENCES

Bailey, M. T. (2012). *The relationship between secondary school teacher perception of grading practices and secondary school teacher perceptions of student motivations.* Dissertation on Degree of Doctor in Educational Leadership, University of Missouris-St.

Dancey, W. M. (1986).*Assessment of teachers grading practices.* Master Degree Thesis, University of British Columbia.

Hasan, M.M. (2016). *Continuous and comprehensive evaluation in secondary school : Awareness and problems education*. Urdu University, India.

Jeans, S. and Judith, W. H. (1995).*Students attitude towards grades and evaluation on writing.* Institute of Liberal Arts in Grinell, Lowa, U.S.

Kannack, Kreuz and Zawiocki (2012).*Using standard based grading to address students strength and weakness.* An action Research of Master of Arts at Xaint Xavier University.

Khanal, P. (2072).*Research methodology in education*. Kathmandu : Sunlight Publication.

Michaelides, M. and Kirshner, B. (2015).*Graduates students attitudes towards letter grading system*. USA : Selective University.

Paneru, T. N. (2016). *Letter grading system : Perceptual difference and student motivation to learn mathematics*. Tribhuvan University, Department of Education, Kirtipur.

Upadhaya, H. P. (2005). *Teaching mathematics in secondary school*. Kathmandu : Ratna Pustak Bhandar.

Wiles, G. (2013).*A qualitative study exploring and assessment practices in the middle school environment.* Dissertation on Degree of Doctor in Education, Northwest Nazarene University.