

CHAPTER ONE

INTRODUCTION

1.1 General Background

A language is a systematic means of communication. It is the code we all use to express ourselves and communicate to others. It is a system for communicating ideas and feelings using sounds, gestures, signs, or marks. Wardhaugh (1972) defines language as "the system of arbitrary vocal symbols used for human communication" (p.3) (as cited in Brown, 1994, p.4) Sapir (1978) views that "language is purely a human and non-instinctive method of communicating ideas, emotions, and desires by means of a system of voluntarily produced symbols" (p.8). Moreover, Richard et al. (1999) define language as "the system of human communication which consists of the structured arrangement of sounds (or their written representation) into larger units, e.g., morphemes, words, sentences, utterances," (p.196). Thus, from the above definitions, it is clear that language is a system of communication. It is a communicative medium of expressing ideas and concepts as well as moods, feelings and attitudes.

Language, so far, we know, is something specific to humans; that is to say, it is the basic capacity that distinguishes human from all other living beings. Over the years, English language has become one of our principal assets in getting global access. English is a means not only for international commerce; it has become increasingly essential for inter- state commerce and communication. Moreover, the latest and most advanced discoveries and inventions in science and technology are being made in the universities located in the United States of America and Britain where English language is the means of scientific discourse.

Among the languages spoken in the world, English has been recognized as a widely used language for global communication. It is a prestigious and a standard language in the world. It is an international lingua franca and also used as an official language in the countries like India, Hong Kong (China), Philippines, Singapore, South Africa, Ireland, New Zealand and so on. It is spoken as mother tongue in the countries like Britain, America, and Canada. It is one of the most widely used languages among the six UN's official languages.

English has begun to be learnt in Nepal after it entered the Indian subcontinent with the expansion of British Empire in the east. The British introduced English in Indian Education system and later it was expanded to Nepal. In this regard, Awasthi (2003) writes,

Formally English entered in Nepalese Education in 1854 when the Prime Minister Jang Bahadur Rana opened Darbar High School in Kathmandu. However, it was introduced in higher education until 1918 when Tri- Chandra College was established. The introduction of ELT in Nepalese education started only in 1971 with the implementation of National Education System Plan (NESP). Until then, the English language teachers were not trained. It started only in 1971 when FOE of T.U. initiated B. Ed. program in English Education. (p.22)

1.1.1 Importance of the English Language

Language, so far as we know, is a system of human communication. Language therefore remains potentially a communicative medium capable of expressing

ideas and concepts as well as moods, feelings and attitudes. According to Manivannan's(2006),

English is available to us as a historical heritage in addition to our own language. We must make the best use of English to develop ourselves culturally and materially so that we can compete with the best in the world of mind and matter. English language is our window to the world. English language is one tool to establish our viewpoint. We can learn from others experience. We can check the theories of foreigners against our experience. We can reject the untenable and accept the tenable. We can also propagate our theories among the international audience and readers.

(<http://www.usingenglish.com/teachers/articlesimportance-english-language.html>)

The English language is being used as an essential medium of communication and instruction. Mostly, the English language is being used in schools, colleges and universities but its importance is not limited to academic circle only. It does have often world use. Some people speak the English language because it sounds more polite and sometimes more catchy. We are enamored with English language because it is already an international and universal language. It is a noble language and possesses one of the finest literatures in the world. Moreover, the latest and the most advanced discoveries and inventions in science and technology are being made in the universities located in the United States of America where English language is the means of scientific discourse

We Nepalese people have tremendous impact of the English language. Though it is difficult in terms of its spellings and pronunciation, people use their own way to pronounce it. Owing to several advantages, English has been used in schools and universities where students can learn English and implement it into their practical life. Nepal needs English for academic activities, to establish diplomatic relations with the foreign countries, to run trade, business and industries, and for the development of advanced science and technology. Moreover, it is necessary to ensure better career within and outside the country. So, English has almost become the language of survival in Nepal.

Realizing the need of the English language, Nepal has introduced English as a compulsory subject from primary to bachelor level and also as an optional subject in different schools and colleges. Furthermore, English is taught as a specialized subject at I. Ed., B. Ed., and M.Ed. in the Faculty of Education T.U.

1.1.2 Language Teaching

A language is a systematic means of communication by the use of sounds or conventional symbols. It is the code we all use to express ourselves and communicate to others. It is a communication by word of mouth. It is the mental faculty or power of vocal communication. It is a system for communicating ideas and feelings using sounds, gestures, signs or marks. Any means of communicating ideas, specifically, human speech, the expression of ideas by the voice and sounds articulated by the organs of the throat and mouth is a language. This is a system for communication. A language is the written and spoken methods of combining words to create meaning used by a particular group of people.

A set of linguists who based their assumptions of language on psychology made claims that language is nothing but 'habit

formation'. According to them, language is learnt through use, through practice. In their view, 'the more one is exposed to the use of language, the better one learns'.

(<http://www.usingenglish.com/teachers/articlesimportance-english-language.html>)

Language teaching generally involves teaching of both the first and second or foreign language. The purpose of learning a language is to enable the students to communicate in the target language. In the world of language teaching and learning many schools of thoughts have come and gone, so have language teaching method waxed and waned popularity. Brown (1994, p. 14) defines teaching method "as the application of theoretical findings and positions. They may be thought of as 'theory in practice'. There has been variety of such applications, some in total philosophical oppositions to other".

To get mastery of language, everybody needs to have the ability in all skills and aspects of language. To convey our thoughts, intentions, wishes, information etc. we need a mastery over all four language skills viz. listening, speaking, reading and writing.

1.1.2.1 Pronunciation: An Introduction

Generally pronunciation refers to the way a word or a language is spoken. It is one of the major aspects of teaching vocabulary. Oxford Advanced Learner's Dictionary (7th edition) defines pronunciation as 'the way in which language is spoken'. From this definition, we can say that pronunciation is the way a word or language is usually spoken. It is the manner in which someone utters a word. According to Ur (1996), pronunciation includes:

- the sound of language, or , pathology

- stress or rhythm

- intonation

The first of these is perhaps the most obvious and clearly defined of the three. However, this does not mean that the other aspects should be neglected: a learner may enunciate the sounds perfectly and still sound foreign because of unacceptable stress and intonation; in oriental 'tone' languages intonation often makes a difference to meanings.

English language learners should know how to produce words correctly. When we attempt to teach or describe a language, the immediate problem that we face is the correct pronunciation of the words. It is very difficult for adult learners to get mastery over the pronunciation like a native speaker. Since the habit of first language has become strong, it is very difficult to break this habit. On the other hand, the second language learners do not necessarily hear and pronounce the same sound. In such situation, the learners speak second language (English) through their pre- conditioned articulators.

In order to be able to deal more effectively with pronunciation, teachers are likely to benefit from developing their knowledge and skills in the following areas:

- i. Understanding how speech sounds are produced, how languages make systematic contrastive use of sounds, which sequences of sounds occur in particular languages, how sequences of sounds are modified in connected speech, and which patterns of stress, rhythm and intonation occur in English and other languages.

- ii. Predicting and identifying the aspects of pronunciation which are problematic for particular learners, drawing if possible on contrastive awareness of English and the learners' first language.
- iii. Identifying priorities for teaching, taking into consideration learner needs and ambitions, and sociolinguistic factors related to the role of English as an international language.
- iv. Distinguishing between aspects of pronunciation which are important for learners to acquire in their own speech, and aspects which are perhaps only important for recognition purposes in facilitating listening comprehension.
- v. Implementing effective procedures for pronunciation teaching, drawing on the range of low- to high-technology resources available.
- vi. Integrating a concern for pronunciation into other classroom work whenever appropriate, as well as isolating specific pronunciation features for focused attention.

(<http://www.teachingenglish.org.uk/transform/teachers/specialist-areas/pronunciation>)

1.1.2.2 Importance of Teaching Pronunciation

Indisputably, teaching pronunciation is one of the most complicated yet significant aspects of EFL/ ESL teaching. In the process of communication,

pronunciation has paramount importance, since successful communication may not take place without correct pronunciation.

Pronunciation is very important for effective communication. It is important for the language learner to speak clearly. So, pronunciation can be a part of speaker's image. It is the beauty of speaking. Sometimes, even the simplest mistake in pronunciation can lead to a great confusion. Therefore, we must speak clearly and precisely. A language learner cannot understand the spoken form of a language well until he knows the pronunciation system. A person is highly encouraged to speak if he has achieved proficiency in pronunciation. Moreover, imparting pronunciation will boost self-esteem, facilitate communication and possibly lead to get a better job and more respect in the work place. (http://writing.colostate.edu/guides/teaching_esl/pronunciation.cfm)

Correct pronunciation is important for listening comprehension. It can be difficult to understand native speakers when they talk at normal speed. One of the reasons is that words sound different when they are said in 'connected speech'. Thus, pronunciation is inevitable for the non- native speakers of English. If the children are habituated to pronounce words in a wrong way, it will be harmful for their higher education, career development and ultimately in language proficiency. If the wrong habit is developed in the learners, they may fail to convey the right information to the listeners.

According to Hewings (2007 p. 10), it can be frustrating and demotivating for the students if they have repeated where communication breaks down because of problems with their English pronunciation. He also explains that difficulties in pronunciation might mean that students fail to get their message across, even when the correct words are being used, or they might fail to what is said to them.

Correct pronunciation is needed for a speaker to communicate. If our pronunciation is incorrect, we will not be understood. The result will be that, for example, Nepali people will think you are speaking in a foreign language and English people will think you are speaking Nepali.

It is more important for language teachers to have good pronunciation. If we do not have good pronunciation, how can we enable our students to pronounce correctly? Therefore, in order to make oneself easily understood while expressing one's own or other people's thoughts in any language, one must be able to pronounce words and sentences in that language correctly.

1.1.2.3 Teaching of Pronunciation

Teaching pronunciation of the English language is not an easy job. It requires a lot of practice for the teacher. Both the students and teachers face a lot of problems in teaching and learning pronunciation. According to Dalton and Seidlhofer (1995), pronunciation, more than any other aspects of a language, will always be influenced by very personal factors such as the learner's attitude to the target language and to the speakers of that language, by individual differences in ability and motivation to language. According to Kenworthy (1987) (as cited in Nunan, 1991, p.106) defines six principal factors affecting pronunciation learning. These are as follows:

- i. The native language:** This is concerned with mother-tongue influence on the second system of a second language or language being learned.
- ii. The age factor:** Kenworthy (ibid.) believes that there is a strong relationship between second language pronunciation ability and age. We simply assume that children learning second language from early age have better pronunciation in comparison to adult learners.

- iii. **Amount of exposure:** The more amount of exposure students receive the better will be the pronunciation. Kenworthy (1987) concludes that while the amount of exposure is a contributory factor, it is not a necessary factor in the development of pronunciation.
- iv. **Phonetic ability:** Phonetic ability refers to whether someone has an 'ear' for a foreign language. It contains 'phonetic coding ability' or 'auditory discrimination ability'. Good discriminators are able to benefit from pronunciation drills, while poor discriminators are not.
- v. **Attitude and identity:** The ability to adopt and develop a foreign pronunciation has also been linked with the extent at which the learner wants to identify with the target culture.
- vi. **Motivation and concern for good pronunciation:** This factor is related to personality. Some students seem unconcerned about making mistakes but concerned about communicating effectively. Others are very concerned about correct pronunciation having desire to identify with the target culture.

Harmer (2001) believes that 'intonation' and 'discriminating pronunciation feature' are the two main difficulties for the students while learning pronunciation. Although there are some problems in teaching pronunciation, there are some ways of presenting sounds of words, which make the students pronounce the words in a meaningful and correct way. Harmer (1991:162-163) gives the following three techniques of presenting sounds:

a. Through Modeling: Here, the teacher works as a model. He pronounces the word, which makes the students practice these sounds through chorus and individual repetition drill. The teacher can use gesture to indicate the stress while he is modeling.

b. Through Visual Representation: The teacher writes down new words on the board and indicates where the stress is. It can be done by:

Underlining

Photograph

Using stress square



Photographer

Using stress mark before the stressed syllable

Photo' graphic

Writing the stress pattern of the words next to it

Photography 

c. Through phonetic symbols: The teacher helps the students to recognize the sounds by showing IPA chart of English language. The students can pronounce the words from the dictionary.

Similarly, Ur (1996), gives following ideas for improving learners' pronunciation:

- imitation of teacher or recorded model of sounds, words, and sentences
- recording of learners speech, contrasted with native model
- systematic explanation and instruction (including details of the structure and movement of parts of the mouth)
- imitation drill: repetition of sounds , words and sentences

- choral repetition of drills
- varied repetition of drills(varied speed, volume and mood)
- learning and performing dialogues(as with drills, using choral work, and varied speed, volume, mood)
- learning by heart of sentences, rhymes, jingles
- jazz chants
- tongue twisters
- self correction through listening to recording of own speech

1.1.2.4 Three Approaches to Teaching Pronunciation

Generally, an approach is theoretical position and belief about the nature of language learning. Anthony (1963 p. 63-67, cited in Richards and Rodgers, 2001) defines the approach in the following way:

.....An approach is a set of correlative assumption dealing with the nature of language teaching and learning. An approach is axiomatic. It describes the nature of the subject matter to be taught.....

According to Celce- Murcia (1996), there are three approaches to pronunciation instruction. They are the intuitive – imitative approach, the analytic linguistic approach and the integrative approach. These approaches combine traditional methods and modern techniques. In the intuitive –imitative approach, learners listen; imitate the rhymes and sounds of the target language without any explicit instruction. Particular technologies are used today for this, such as audiotapes, videos, computer- based programs and websites. In the

analytic linguistic approach, the learners are provided with explicit information on pronunciation such as the phonetic alphabet, articulatory description and vocal chords. Once again, this explicit information can be presented in various interactive speech software and websites today. In the current interactive approach, pronunciation is viewed as an integral component of communication, rather than an isolated drill and practice sub- skill. Pronunciation is practiced within meaningful task- based activities. Learners use pronunciation- focused listening activities to facilitate the learning of pronunciation. There is more focus on the supra-segmental features like stress, rhymes, and intonation as practiced in extended discourse beyond the phoneme and word level.

1.1.2.5 Teaching Pronunciation through Electronic Dictionary

As mentioned earlier, teaching pronunciation simply refers to the process of imparting knowledge to pronounce words and sentences appropriately. In other words, it is the way to enable the students to pronounce the words and sentences. And the electronic dictionary refers to the dictionary, which is stored in computer and can be accessed by programs so that definition, pronunciation and meaning of different vocabularies can be looked up and displayed on the screen. ([http://www.google .cum. np search? hl = ne& q =define: electronic +dictionary](http://www.google.com.np/search?hl=ne&q=define:electronic+dictionary)). With the advancement of scientific technology in teaching and learning, electronic dictionary is now found to be used in teaching and learning in the various aspects of language in the recent years. However, the first electronic dictionary was produced for the Japanese market and was appeared in 1979 under the name Pocket Electronic Translating Machine. ([www. wikipedia.org/ wiki/ electronic dictionary definition # History](http://www.wikipedia.org/wiki/electronic_dictionary_definition#History))

In this research, electronic dictionary refers to the CD of Oxford Advanced Learner's Dictionary (2005). With the help of computer and speakers, it can be used to teach the pronunciation of the vocabularies to the students. And the

teacher can use different techniques to teach pronunciation with it. However, the researcher used drilling as a main technique to teach pronunciation, it is, according to Kelly (2002 p. 16), one of the main ways in which pronunciation is practiced in the classroom. The computer was to pronounce the words one at a time while the students would listen to and imitate as they had listened. This process was prolonged until all the students would know the correct pronunciation of all the planned five words during 45 minutes.

1.2 Review of the Related Literature

Many researches have been carried out on pronunciation in the Department of English Education. Ghimire (2003) carried out the research on pronunciation proficiency of the students of lower secondary level students. He found out that the average pronunciation ability of the students of lower secondary level in Kathmandu valley is found to be 37.88 percent. The performance of boys was better than the girls. Similarly, he found out that the highest ability in the pronunciation of English words by Tibeto -Burman native speaker was 39.17 per cent and Indo- Aryan native speaker was 36.54 percent. Similarly, Thapa (2004) carried out a research on the pronunciation proficiency at secondary level. He found out that the pronunciation ability of the students of Kathmandu valley is 53.68 percent. In comparative analysis between the variables, Tibeto-Burman language background students had excelled their Indo- Aryan counterparts. His study showed that the performance of the boys was better than those of the girls.

Devkota (2006) carried out a research on the pronunciation proficiency of the students of grade five. His study showed that the overall pronunciation proficiency of the fifth grade students in lexical level was 51.53 per cent. Similarly, Tibeto – Burman native speakers, in terms of medium of instruction, were found to be more proficient than their opponent group. From the analysis

of word types, monosyllabic words were found easier to then students in comparison to others. Moreover, English fricatives were more difficult for Nepali learners in comparison to others. Similarly, Kandel (2007) carried out a research on the pronunciation of the plural and past tense morphemes of the students of grade nine. His study showed that the overall pronunciation of the plural morpheme of regular nouns and past tense morpheme of regular verbs is 49.68 percent. Similarly the pronunciation proficiency of the plural morpheme is 50.40 percent and the past tense morpheme is 48.95 percent. In terms of sex, the girls obtained 50.23 percent. The boys' proficiency on the pronunciation of the past tense morpheme of regular verb is found better than the girls' counterpart. In similar way, Pandey (2007) conducted a research on 'Effectiveness of Imitation Drill in Teaching Pronunciation'. He attempted to find out the effectiveness of imitation drill in teaching pronunciation and compare the students' pronunciation in terms of boys' versus girl' performance. He concluded that the experimental group was found much better than the control group. The experimental group excelled the control group by 8.05 percent in the total performance. Moreover, he concluded that the boys of experimental group performed better than the boys of control group and the girls of experimental group performed better than the girls of controlled group. In total performance, girls of experimental group performed better than the boys of experimental group.

Khanal (2007) carried out a research on 'Proficiency in Pronunciation a Case of Grade Three Students' He attempted to find out the pronunciation proficiency of grade three students in terms of boys and girls, Kathmandu and Lalitpur district students. He found out that the overall pronunciation proficiency of students of Kathmandu district was found to be 55.45%. Moreover, the pronunciation proficiency of the students of Lalitpur district was found to be 55.18% and overall pronunciation proficiency of girls of Kathmandu and Lalitpur district was found to be 56.63% and where as boys of both district is found to be 54.09%.

The review above shows that most of the researches have been carried out on proficiency on pronunciation of the different educational level and none of the researches have carried out a research on teaching pronunciation with electronic dictionary. Therefore, the researcher has selected the topic ' Effectiveness of Teaching Pronunciation through Electronic Dictionary' for the study.

1.3 Objectives of the Study

The study had the following objectives:

- i. to find out the effectiveness of electronic dictionary in teaching pronunciation in terms of the following variables:
 - a) gender
 - b) language family
- ii. to suggest some pedagogical implications of the study

1.4 Significance of the Study

The findings of the study will be fruitful to the teachers and students who are involved in teaching and learning of English language. They will know the usefulness of electronic dictionary in teaching pronunciation. Likewise, the findings are equally useful for curriculum developers, textbook writers, and educationists. Moreover, the study will be useful source for those researchers who are interested in conducting research in the similar areas in future.

CHAPTER TWO

METHODOLOGY

This chapter deals with the methodology applied to carry out the study. To fulfill the designed objectives the following methodology was adopted.

2.1 Sources of Data

The researcher applied both primary and secondary sources of data.

2.1.1 Primary Sources of Data

The primary sources of data were the forty students who were studying at grade six in Swati Sadan Secondary School, Machhapokhari, Balaju, Kathmandu.

This study is mainly based on primary sources of data.

2.1.2 Secondary Sources of Data

The researcher consulted various books, theses, journals and websites as per the requirement of the study as the secondary sources of data. Some of them include CD of Oxford Advanced Learner's Dictionary, Carter and Nunan (2001), Kumar (2006), Khaniya (2005), Journal of NELTA, Brown (1994), Ur (1996), Kelley (2000), Harmer (1991), Wardhaugh (1972), [www. google .com](http://www.google.com). and so forth.

2.2 Population of the Study

The population of the study was the students of grade six of Swati Sadan English Boarding School studying in Kathmandu district. And the sample population of the study was the forty students of the same class.

2.3 Sampling Procedure

The researcher selected forty students from grade six using simple random sampling procedure. He asked for the list of the students from the administration and selected forty of them from both the sections using fishbowl draw method. The students were divided into two groups; experimental and controlled groups using systematic random sampling procedure. While dividing the groups, the researcher tried to maintain equal pronunciation proficiency level for both groups by putting the even roll numbered students in experimental group and odd roll numbered students in controlled group.

2.4 Tools for Data Collection

The main tool for data collection was a test administered to the students. According to Khaniya (2005)

Language tests are used to measure someone's language ability in the second language acquisition. And at the same time, language tests serves as valuable sources of information about how effective the learning and teaching has been. Language teacher use the tests as instruments to understand students' strengths and weaknesses, to argue their progress, and to determine their achievement levels (p.3).

The researcher selected the 150 words (**Appendix 1**) carrying one mark to each item. He selected those words from 'words to know' given in New Oxford Modern English Course Book of class six. And he administered a pre-test to the forty students to establish their initial level of competence in pronunciation of 150 words individually. A post- test was finally administered to check the achievement after teaching.

2.5 Process of Data Collection

At first, the researcher visited the selected school and talked to the authority and got their permission to carry out this study. He also explained the purpose and process of the study. He selected the forty students of grade six using simple random sampling procedure.

The researcher developed the test items for pre-test and post-test (same for both pre-test and post-test) and the lesson plan for teaching. A pre- test was administered with the help of a tape recorder to identify the actual pronunciation proficiency prior to the experiment. The students were given 10 minutes to pronounce 150 words. Their pronunciation was checked on the basis of R. P.; individual performance was noted and mean was found out. Then, the researcher divided the sample into two groups: controlled group and experimental group in such a way that they will have equal level of proficiency. For it, the researcher divided the group on the basis of their class roll number. All odd numbered students were put in controlled and all even roll numbered students were in experiment group. The group division was as follows:

Roll Number	Experimental Group	Controlled Group
1-40	Even	Odd

The controlled group was taught without using any electronic material. That is to say, the researcher had pronounced the words himself while experimental group was taught with electronic dictionary using computer and speaker.

However, for the both groups, the medium of teaching was English.

Pronunciation of the five vocabulary items was taught in a day for both the groups. Each group was taught for six days in a week, one period in a day and each period lasted for 45 minutes. Altogether 60 lesson plans were made to

teach for 30 days i.e.30 days for controlled group and 30 days for experimental group simultaneously.

After thirty lessons, a post- test was administered to the both groups. Each student's pronunciation was recorded and analysed. Finally, the difference of pre-test and post-test of each group was found out. Then, mean score difference of both the groups was found out and compared in order to determine the effectiveness of electronic dictionary in teaching pronunciation.

2.6 Limitations of the Study

This study had the following limitations:

- i. This research is limited to only one school, Swati Sadan Secondary School, Balaju, Kathmandu.
- ii. Only the students of grade six were taken part and taught for 30 days.
- iii. The sample size was forty students only.
- iv. The students' pronunciation was checked on the basis of R.P. (Received Pronunciation).
- v. The students were taught only through the imitation drill.
- vi. Only the 150 words were taught.
- vii. It is limited to a private school of Kathmandu district.
- viii. The primary data was collected from oral test.

CHAPTER THREE

ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data. The collected data using the test paper (pre-test and post-test) from the students of Swati Sadan Secondary School were presented, analysed and interpreted under three main and four sub categories. The data obtained from students have been grouped under three main categories and analysed separately.

- i. Group based comparison
- ii. Sex based comparison
- iii. Language family based comparison

The first heading 'group based comparison' deals with the four different comparisons of performance in terms of controlled and experimental group. They are Boys' Performance, Girls' Performance, Tibeto- Burman Language Family Background Students Performance and Indo- Aryan Language Family Background Students' Performance. The second heading 'sex based comparison' consists of comparison of the performance of girls and boys in terms of group. The third category 'Language family based comparison' deals with the comparison of performance in Tibeto- Burman language family background students and Indo- Aryan language family background students in terms of group.

To find out the effectiveness of electronic dictionary in teaching pronunciation, the obtained score of each student in the pre-test was subtracted from the score of the post-test. Then, the mean score difference of the two tests was calculated and compared between the experimental and controlled groups. Similarly, to prove the effectiveness of electronic dictionary in teaching pronunciation, 't' - test (the test of significance of the difference between two means) was applied.

In the analysis, if 't' value was greater than calculated value at 0.05 level of 't'-test, it was strongly claimed that the difference between two means was not significant and vice versa.

3.1 Group Based Comparison

In this comparison, the result of experimental and controlled groups as discussed above is shown under separate heading in a single table.

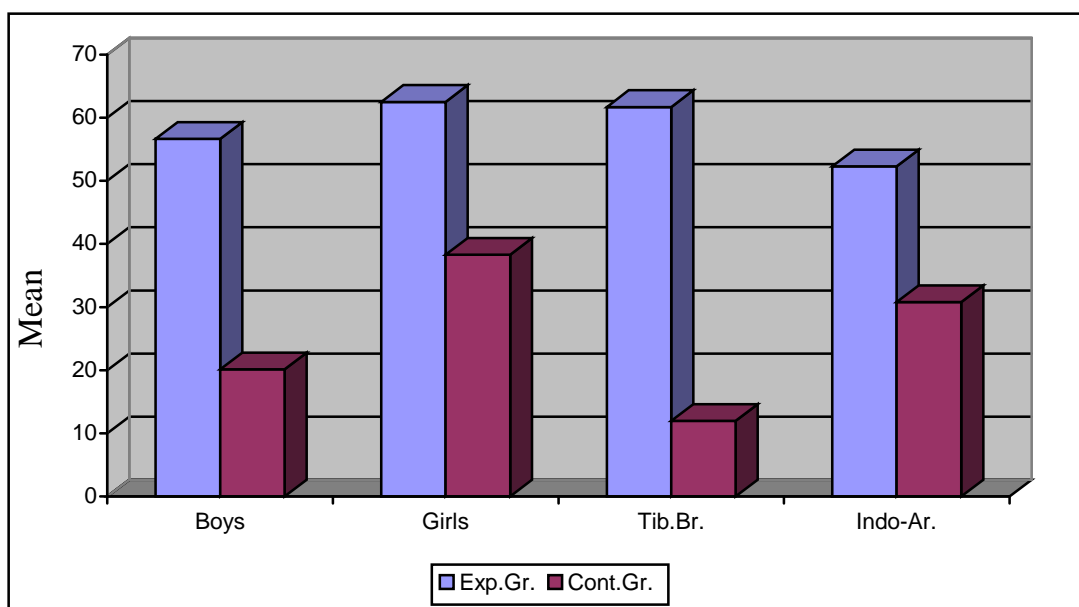
Table No. 1: Difference in Mean of Experimental and Controlled Group

S.N.	Categories of Performance	Cont Mean	Exp. Mean	Difference
1	Boys' Performance	20.15	56.64	36.49
2	Girls' Performance	38.29	62.50	24.21
3	Tibeto-Burman Language Family Background Students' Performance	12	61.69	49.69
4	Indo- Aryan Language Family Background Students' Performance	30.80	52.29	21.49
	Total Mean	101.24	233.12	131.88

The above table shows that the experimental group has 233.12 total mean score difference in holistic comparison of four variables, whereas the control group has only 101.24 mean score difference. It shows that controlled group has less mean score difference than that of the experimental group. The experimental group has excelled the controlled group by 131.88. So, it proves that experimental group has learnt to pronounce better than the controlled group. Due to this fact, what we conclude is electronic dictionary is effective and useful in teaching pronunciation. It has been found out that in all variables, experimental group has got better mean score difference than the controlled group. It has also proved that teaching pronunciation through electronic

dictionary has been effective over the conventional way of teaching pronunciation. Moreover, the following figure has also proved that electronic dictionary is very useful in teaching pronunciation since there is significant increment in the performance of experimental group.

Figure No. 1: Difference in Mean of Experimental and Controlled Group



3.2 Boys Performance Based Comparison

There were 27 boys and out of 40 students in sample population of class six. In this category, there were 150 test-items carrying 150 full marks. These items were used in the both texts.

Table No. 2: Mean Score of Boys Performance

Group	Mean	S.D.	C.V.
Controlled	20.15	18.96	0.94
Experimental	56.64	24.45	0.43

The above furnished data shows that the experimental group boys' mean score is far better than the mean score difference of the controlled group boys. The

controlled group boys have got 20.15 mean score difference which is less by 36.49 than the mean score difference of experimental group boys as their mean score difference is 56.64. Similarly, standard deviation of controlled group and experimental in boys' performance is 18.96 and 24.45 respectively.

By this data, what we can say is the experimental group has performed better than the controlled group in this category.

1. Testing Statistical Significance of Boys' Performance:

$H_0: \mu_1 = \mu_2$ There is no significant difference between two groups.

$H_1: \mu_1 \neq \mu_2$ There is significant difference between two groups.

X_1	$(X_1 - X_1)^2$	X_2	$(X_2 - X_2)^2$
13	51.12	60	11.2707
7	172.92	70	178.4147
46	668.22	88	983.2739
33	165.12	29	764.1243
5	229.52	22	1200.1235
5	229.52	32	607.2675
7	172.92	27	878.6955
13	51.12	69	152.7003
10	103.02	90	1112.7027
60	1588.02	47	92.9835
16	17.22	90	1112.7027
3	294.12	66	87.5571
44	568.82	81	593.273
		22	1200.1235
262	$\sum (X_1 - \bar{X}_1)^2 = 4311.66$	793	$\sum (X_2 - \bar{X}_2)^2 = 7769.5268$

$$\bar{X}_1 = \frac{\sum X_1}{n_1} = \frac{262}{13} = 20.15$$

$$\bar{X}_2 = \frac{\sum X_2}{n_2} = \frac{793}{14} = 56.64$$

$$S_1^2 = \frac{\sum (X_1 - \bar{X}_1)^2}{n_1 - 1}$$

$$S_2^2 = \frac{\sum (X_2 - \bar{X}_2)^2}{n_1 - 1}$$

$$S_1^2 = \frac{4311.66}{12} = 359.31$$

$$S_2^2 = \frac{7769.5268}{13} = 597.6559$$

$$S_2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

$$S_2 = \frac{12 \times 359.31 + 13 \times 597.6}{25}$$

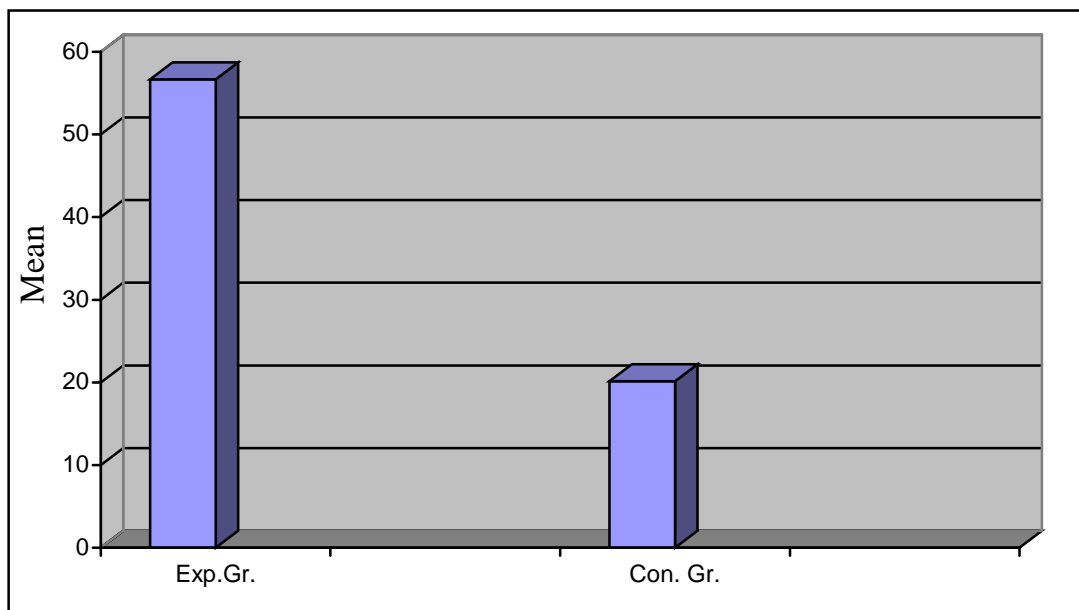
$$\therefore S^2 = 483.25$$

Now; Testing Statistics

$$t = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{20.15 - 56.64}{\sqrt{483.25 \left(\frac{1}{13} + \frac{1}{14} \right)}} = \frac{-36.49}{\sqrt{71.69}} = -4.31$$

The t-test has indicated that there is a significant difference between the achievement of controlled and experimental group this category. Since the calculated value (4.31) is greater than tabulated value (1.708), (H_0 is rejected) there is significance difference between the two groups .So, the effect of teaching pronunciation using electronic dictionary for the boys is very much significant. The following figure also shows there is a significant increment in the performance of experimental group.

Figure No. 2: Mean Score of Boys' Performance



3.3 Girls' Performance Based Comparison

There were 150 test-items carrying 150 full marks. It contained 150 vocabulary items. It was also designed in both texts. There were only 13 girls in the sample of the research.

Table No. 3: Mean Score of Girls' Performance

Group	Mean	S.D.	C.V.
Controlled	38.29	15.61	0.41
Experimental	62.50	28.56	0.46

The above table shows that the controlled group has got 38.29 mean score difference in girls' performance category whereas experimental group has got 62.50 mean score difference. Similarly, standard deviation of controlled and experimental groups in girls' performance is 15.61 and 28.56 respectively.

The test analysis of Girls' performance shows that mean score difference of experimental group is more by 24.21 than the mean score difference of controlled group. The experimental group has excelled the controlled group by 49.69. By the result, what we claim is electronic dictionary is very effective in teaching English pronunciation.

Testing Statistical Significance of Girls' Performance

$H_0: \mu_1 = \mu_2$ There is no significant difference between two groups

$H_1: \mu_1 \neq \mu_2$ There is significant difference between two groups.

X_1	$(X_1 - \bar{X}_1)^2$	X_2	$(X_2 - \bar{X}_2)^2$
53	216.5106	74	132.25
38	0.08162	72	90.25
48	94.3676	94	992.25
11	744.5094	49	182.25
42	13.7960	74	132.25
24	204.0812	12	2550.25
52	188.0820		
268	$\sum(X_1 - \bar{X}_1)^2 = 1461.4284$	375	$\sum(X_2 - \bar{X}_2)^2 = 4079.5$

$$\bar{X}_1 = \frac{\sum X_1}{n_1} = \frac{268}{7} = 38.29$$

$$\bar{X}_2 = \frac{\sum X_2}{n_2} = \frac{375}{6} = 62.50$$

$$S_1^2 = \frac{\sum (X_1 - \bar{X}_1)^2}{n_1 - 1}$$

$$S_2^2 = \frac{\sum (X_2 - \bar{X}_2)^2}{n_2 - 1}$$

$$S_1^2 = \frac{1461.42}{6} = 676.90$$

$$S_2^2 = \frac{4079.5}{5} = 815.90$$

$$S_2^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

$$S_2^2 = \frac{6 \times 676.90 + 5 \times 815.90}{11}$$

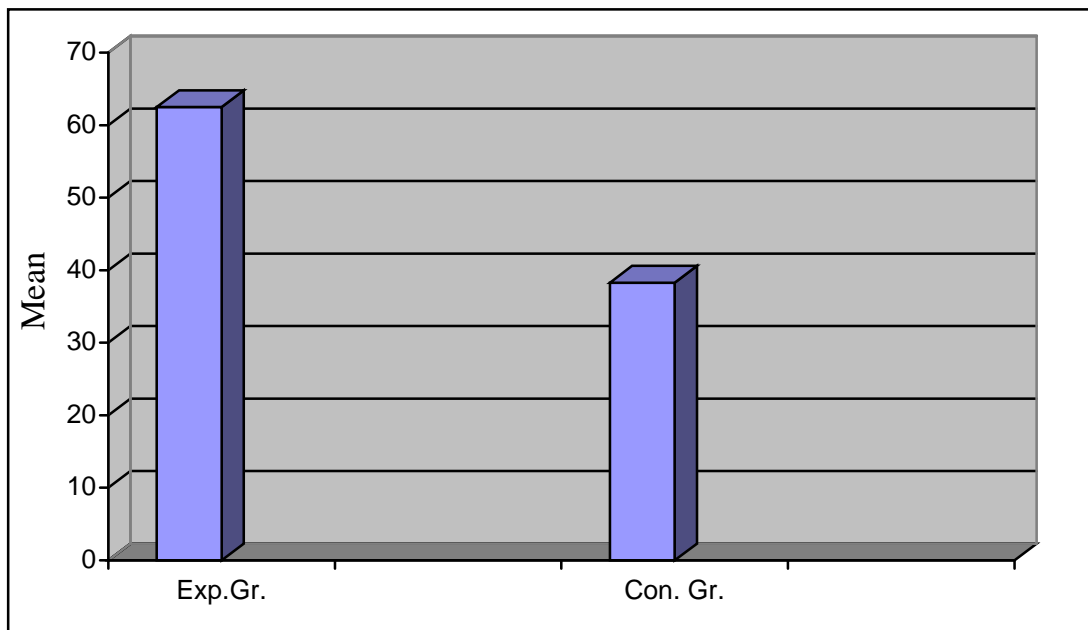
$$\therefore S^2 = 503.70$$

Now; Testing Statistics

$$t = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{38.29 - 62.50}{\sqrt{503.70 \left(\frac{1}{7} + \frac{1}{6} \right)}} = \frac{24.21}{\sqrt{155.91}} = 1.94$$

The t- test indicated that there is a significant difference in pronunciation proficiency between controlled and experimental groups. Since the calculated value (1.94) is greater than tabulated value (1.796), (H_0 is rejected), there is significant difference between two groups and the effect of teaching pronunciation through electronic dictionary for girls is significant. Thus, electronic dictionary is effectively significant for teaching pronunciation. It is also proved by the following figure.

Figure No. 3: Mean Score of Girls' Performance



3.4 Tibeto-Burman Language Family Students' Performance Based Comparison

There are 150 vocabulary items carrying 150 full marks that were designed in both the tests. There were 13 students in Experimental group and 5 students in Control group in Tibeto- Burman language family background students. Their performance has been shown in the following table.

Table No. 4: Mean Score of Tibeto- Burman Language Family Students

Group	Mean	S.D.	C.V.
Controlled	12	7.42	0.62
Experimental	61.69	27.06	0.44

The above table shows that controlled group of Tibeto- Burman language family background students has got 12 mean score difference whereas experimental group has got 61.69. Similarly, the standard deviation of controlled group and experimental in Tibeto-Burman language family students is 7.42 and 27.07 respectively.

The test analysis of Indo- Aryan language family background family shows that experimental group has excelled the controlled group by 49.69 mean score difference. By the result, what we claim is electronic dictionary is very effective in teaching English pronunciation.

Testing Statistical Significance of Tibeto-Burman Language Family Students

$H_0: \mu_1 = \mu_2$ There is no significant difference between two groups

$H_1: \mu_1 \neq \mu_2$ There is significant difference between two groups.

X_1	$(X_1 - \bar{X}_1)^2$	X_2	$(X_2 - \bar{X}_2)^2$
13	1	74	151.54
7	25.00	72	106.3086
5	49.00	60	2.8638
11	1	94	1043.7874
24	144.00	70	69.0178
		88	192.0950
		29	1068.78641
		49	161.0944
		27	1203.5556
		90	801.3258
		47	215.8636
		90	801.3258
		12	1469.3146
60	$\sum (X_1 - \bar{X}_1)^2 = 220$	802	$\sum (X_2 - \bar{X}_2)^2 = 8786.7682$

$$\bar{X}_1 = \frac{\sum X_1}{n_1} = \frac{60}{5} = 12$$

$$\bar{X}_2 = \frac{\sum X_2}{n_2} = \frac{802}{13} = 61.69$$

$$S_1^2 = \frac{\sum (X_1 - \bar{X}_1)^2}{n_1 - 1}$$

$$S_2^2 = \frac{\sum (X_2 - \bar{X}_2)^2}{n_2 - 1}$$

$$S_1^2 = \frac{220}{4} = 55$$

$$S_2^2 = \frac{8786.7682}{12} = 732.23$$

$$S_2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

$$S_2 = \frac{4 \times 55 + 12 \times 732.23}{16}$$

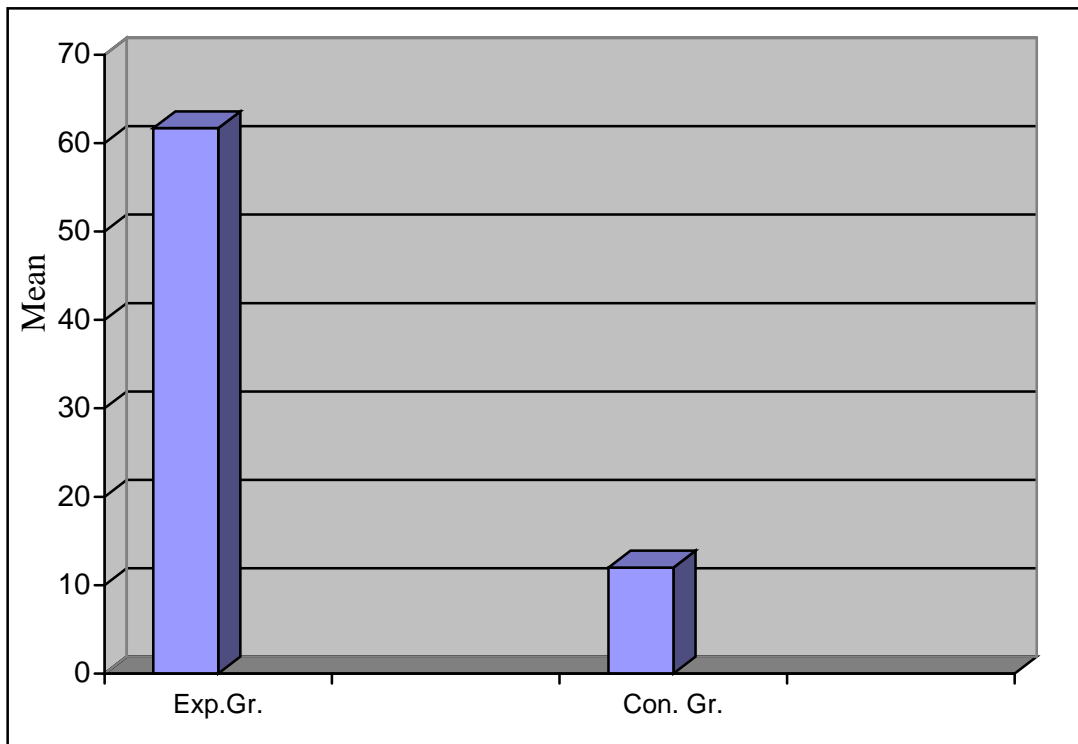
$$\therefore S^2 = 59.51$$

Now; Testing Statistics:

$$t = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{30.80 - 52.29}{\sqrt{59.51 \left(\frac{1}{5} + \frac{1}{13} \right)}} = \frac{-21.49}{4.06} = -5.29$$

The t- test indicated a significance difference between the performance of control group and experimental group at 0.05 level. Since the calculated value (5.29) is greater than tabulated value (1.753), (H_0 is rejected) there is a significant difference between two groups. Thus, it is found out that the electronic dictionary is very much effective in teaching pronunciation. The same result has been shown by the following figure.

Figure No. 4: Mean Score of Tibeto-Burman Language Family Students



3.5 Indo-Aryan Language Family Students' Performance Based Comparison

There were 7 students in Experimental group and 15 students in controlled group in the Indo – Aryan language family background category. The test item of this category consists of 150 vocabulary items having 150 full marks. Those items were used in the both pre-test and post-test.

Table No. 5: Mean Score of Indo-Aryan Language Family Students

Group	Mean	S.D.	C.V.
Controlled	30.80	20.70	0.67
Experimental	52.29	25.85	0.49

The data shows that mean score of experimental group students in Indo-Aryan language family background is 52.29. Similarly, the mean score of difference of controlled group in the same category is 30.80. Similarly, the standard deviation of controlled group and experimental in Indo- Aryan language family students is 20.70 and 25.85 respectively.

The test analysis of the Indo- Aryan language family background shows that the experimental group has excelled the controlled group by 21.49 mean score. By the result, what we claim is electronic dictionary is very useful in teaching English pronunciation.

Testing Statistical Significance of Indo-Aryan Language Family Students

$H_0: \mu_1 = \mu_2$ There is no significant difference between two groups.

$H_1: \mu_1 \neq \mu_2$ There is significant difference between two groups.

X_1	$(X_1 - \bar{X}_1)^2$	X_2	$(X_2 - \bar{X}_2)^2$
53	492.84	22	917.2236
38	51.84	32	411.5096
48	295.84	69	279.3678
46	231.04	74	471.5108
33	4.84	66	188.0820
5	665.64	81	824.5110
42	125.44	22	917.2236
5	665.64		
7	566.44		
10	432.64		
60	852.64		
52	449.44		
16	219.04		
3	772.84		
44	174.24		
462	$\sum (X_1 - \bar{X}_1)^2 = 6000.36$	366	$\sum (X_2 - \bar{X}_2)^2 = 4009.4284$

$$\bar{X}_1 = \frac{\sum X_1}{n_1} = \frac{462}{15} = 30.80$$

$$\bar{X}_2 = \frac{\sum X_2}{n_2} = \frac{366}{7} = 52.29$$

$$S_1^2 = \frac{\sum (X_1 - \bar{X}_1)^2}{n_1 - 1}$$

$$S_2^2 = \frac{\sum (X_2 - \bar{X}_2)^2}{n_2 - 1}$$

$$S_1^2 = \frac{6000.36}{14} = 428.60$$

$$S_2^2 = \frac{4009.4284}{6} = 668.24$$

$$S_2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$

$$S_2 = \frac{14 \times 428.60 + 6 \times 668.24}{20}$$

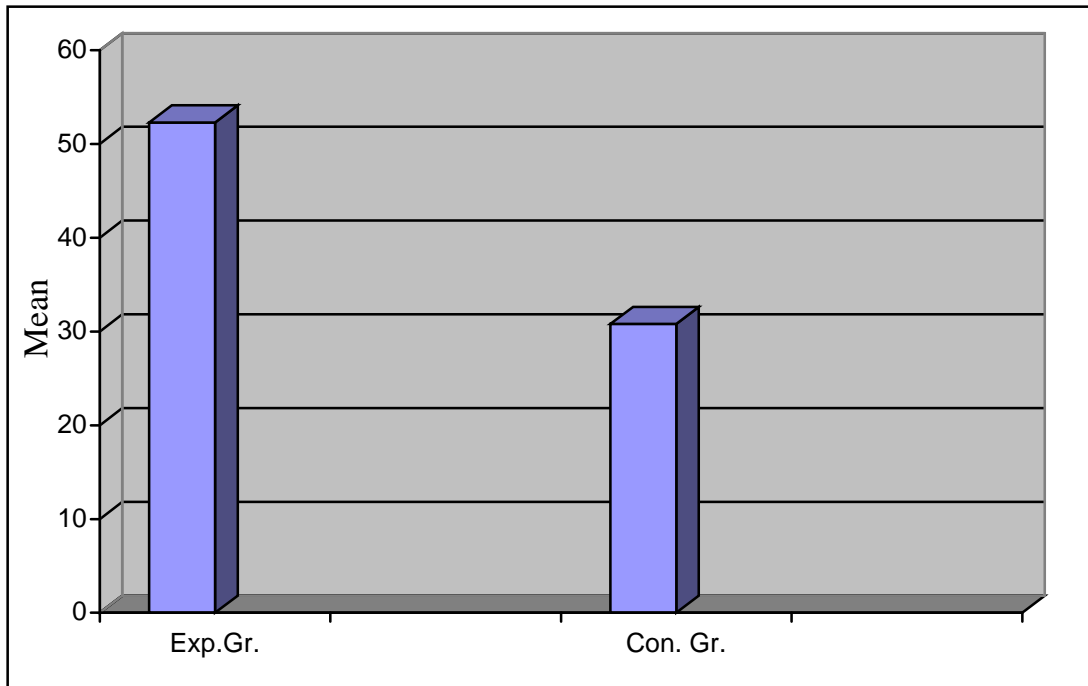
$$S_2 = 500.49$$

Now; Testing Statistics:

$$t = \frac{(\bar{X}_1 - \bar{X}_2)}{\sqrt{S^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} = \frac{30.80 - 52.29}{\sqrt{500.49 \left(\frac{1}{15} + \frac{1}{7} \right)}} = \frac{-21.49}{\sqrt{104.86}} = -2.10$$

The t-test has indicated that there is a significant difference between the achievement of experimental group and controlled group at 0.05 level. Since the calculated value (2.10) is more than tabulated value (1.725), (H_0 is rejected) there is significant difference between two groups. So, the effect of teaching pronunciation through electronic dictionary for the students of Indo- Aryan language family background is very useful. Thus, it has been found out that the experimental group has performed better than the controlled group. The following figure also shows the significant increment of performance of the experimental group.

Figure No. 5: Mean Score of Indo -Aryan Language Family Students



CHAPTER FOUR

FINDINGS AND RECOMMENDATIONS

4.1 Findings

The main objective of this research was to find out the effectiveness of electronic dictionary in teaching pronunciation. The following findings were deduced after the analysis and interpretation of the data:

- a. Teaching pronunciation through electronic dictionary is better and more effective than teaching pronunciation without electronic dictionary (conventional teaching) because the total mean score difference of the experimental group is 233.12 and total mean score difference of the controlled group is 101.24. So, the experimental group has excelled the controlled group by 131.88. Thus, this data shows that teaching pronunciation through electronic dictionary is far better in comparison

to teaching pronunciation with out using electronic dictionary (conventional way of teaching).

- b. In boys' performance based comparison as a whole, the experimental group got better result than the controlled group since the experimental group excelled the controlled group by 38 mean score difference. Similarly, the t-test indicated a significant difference between the achievement of controlled and experimental group. It is found out that calculated value (4.31) is greater than tabulated value (1.708). So, there is significance difference between the two groups and the effect of teaching pronunciation through electronic dictionary for the boys is very much significant.
- c. The electronic dictionary seemed significant in girls' performance based comparison also. It is found out that the mean score difference of the experimental group is more by 24.21 than the controlled group. Moreover, the t- test indicated that the calculated value (1.94) is greater than tabulated value (1.796). So, there is a significant difference between two groups and the effect of teaching pronunciation through electronic dictionary for girls is significant. Thus, electronic dictionary is effectively significant for teaching pronunciation.
- d. The electronic dictionary is also better for Tibeto- Burman language speaking family background students to learn pronunciation. It is effective in comparison to the conventional way of teaching. In the study, the experimental group had excelled the controlled group students by 49.69. Moreover, The calculated t- test value (5.29) is greater than tabulated value (1.753). So, we can say that there is a significant

difference between two groups. Thus, the electronic dictionary is very much useful in teaching pronunciation.

- e. The effectiveness of electronic dictionary is found significant in Indo-Aryan language family background students since the mean score difference of experimental group is more (52.29) than that of the controlled group (30.8). In this category, experimental group excelled the controlled group by 21.49. Similarly, the calculated value of t- test (2.10) is more than tabulated value (1.725) value at 0.05 level. So, there is significant difference between the two groups. Thus, electronic dictionary is very effective to teach pronunciation for Indo- Aryan language family background students.

4.2 Recommendations

On the basis of findings obtained from the analysis and interpretation of the collected data, some salient recommendations with some pedagogical implications have been suggested as follows:

- a. In all categories, the experimental group has obtained better marks compared to the controlled group. Due to this fact, we can say that electronic dictionary is better than conventional teaching technique of teaching English pronunciation. So electronic dictionary should be applied in teaching English pronunciation.
- b. Electronic dictionary emphasizes cooperative learning by providing students an opportunity to do activity in pair work. The teacher should use these techniques to assign students to practice pronunciation of the new words. So, it should be implemented in the language class.

- c. Each pair member is responsible for all activities. So, it is also useful to build the students' confidence, group sharing skill and commenting and the skill of giving feedback to others. The students can enjoy working in pairs to discuss pronunciation. It also helps to those students who are introvert and do not want to expose themselves in front of the teacher.
- d. We can certainly use imitation drill in teaching English pronunciation by using in any size and number of the students. So, it should be implemented to teach pronunciation in language class. Moreover, teaching English through electronic dictionary allows the students to listen to what they want again and again.
- e. It is found out that the electronic dictionary is able to improve the pronunciation of the students and arouse the more interest of the students to learn. So, it is most helpful for practicing and learning pronunciation.
- f. It is also useful to make the class student centered. The main activity of teaching pronunciation using electronic dictionary is practicing the pronunciation in pairs. Therefore, the students can enjoy working in pairs and groups to practice pronunciation.
- g. The syllabus designer, text book writers, methodologists and teachers should give priority to use electronic dictionary in teaching pronunciation. They should include the electronic dictionary in the designed materials because it is useful to make the class more interesting and live.
- h. This research was limited to 40 students of a private school of Kathmandu district. The experimented technique was limited to only one group in which the number of students was confined. So, it cannot

be claimed that the findings of the research are applicable for all schools and institutions of Nepal. It cannot also be said that the findings of the study are complete in themselves. This is the very broad and complicated area. So it is inevitable to carry out further research in this field including a large number of population or subjects.