

# **Effectiveness of Paraorthographic Texts**

**A Thesis Submitted to the Department of English Language  
Education, University Campus, Tribhuvan University,  
Kirtipur, Nepal  
In Partial Fulfillment for the Master's Degree in Education  
(Specialization in English Education)**

**By**

Narendra Narayan Sahu

**Faculty of Education  
Tribhuvan University  
Kirtipur, Kathmandu, Nepal.**

**2007**

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Second year Exam  
Roll No.: 28237/2059**

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thesis: 2064.08.19 (B.S.)**

## RECOMMENDATION FOR ACCEPTANCE

This is certified that **Mr Narendra Narayan Sahu** has prepared the thesis entitled **Effectiveness of Paraorthographic Texts** under my guidance and supervision.

It is my pleasure to recommend the thesis for acceptance.

Date: 2064.08.19 (B.S.)

.....

**Dr. Tirth Raj Khaniya.**

Professor

Department of English Language Education

University Campus, T.U.

Faculty of Education

Tribhuvan University

Kirtipur, Kathmandu,

Nepal

## RECOMMENDATION FOR EVALUATION

This thesis has been recommended for evaluation by the following  
Research Guidance Committee:

**Dr. Chandreshwar Mishra**

.....

Reader and Head

Chairman

Department of English Language Education

University Campus, T.U.

**Dr. Jai Raj Awasthi**

.....

Professor and Chairperson

Member

English and Other Foreign Languages

Education Subject Committee, T.U.

**Dr. Tirth Raj Khaniya (Guide)**

.....

Professor

Member

Department of English Language Education,

University Campus, T.U.

Date: 2064.08.21

## EVALUATION AND APPROVAL

This thesis has been evaluated and approved by the following Thesis Evaluation Committee

**Dr. Chandreshwar Mishra** .....  
Reader and Head Chairman  
Department of English  
Language Education, University Campus, T.U.

**Prof. Dr. Jai Raj Awasthi** .....  
Professor and Chairperson Member  
English and Other Foreign Languages  
Education Subject Committee, T.U.

**Dr. Tirth Raj Khaniya (Guide)** .....  
Professor Member  
Department of English Language Education,  
University Campus, T.U.

Date: .....

**DEDICATED**

*To my wife and my late parents  
who spent their entire life  
to make me what I am today*

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Decmber,5 2007

**Narendra Narayan Sahu**



## **ABSTRACT**

The present research work entitled “Effectiveness of Paraorthographic Texts” is carried out to determine the effectiveness of the reading texts in learning that have paraorthographies along with orthographies and only orthographies in some lessons of the text book of grade XI; the researcher realized this language problems in learning. For this, grade XI students of government aided and private schools from Saptari, Lalitpur and Kathmandu districts were taken as sample population. Out of some unidentified pictures mentioned in the text-book, only one picture and passage were taken for this research. The test was administered three times in one month interval in the different schools to check the effectiveness of paraorthography among the students and the third test was the last experimental test of the research from different districts. The three tests were compared to find out the effectiveness of paraorthographic texts in teaching and learning.

In the study, it was found that there was the obvious effectiveness of paraorthographic texts irrespective of geographical areas, genders, and faculties. Students in learning were found better in the Paraorthographic texts than in the orthographic texts. That is, the paraorthographic texts were easier for students to comprehend in comparison to orthographic texts.

This research has been divided into four chapters. Chapter one introduces the short introduction of English Language, definition and additional elements of orthographic and paraorthographic texts, review of the related literature, objectives of the study and significance of the present study.

The second chapter deals with methodology adopted for the study under which sources of data (primary and secondary sources), sampling procedure, tools for data collection, processes of data collection and limitations of the study are presented.

The third chapter deals with the analysis and interpretation of data. The data were analyzed and interpreted by tabulating data on the basis of average increment percentage. The analysis has been presented under the following headings:

- 1 Holistic – Comparison.
- 2 Group– based comparison.

The fourth chapter deals with the findings and recommendations and pedagogical implications which are made on the basis of the analysis and interpretation of the collected data.

Besides the main chapters, the supportive materials such as name of respondents, questionnaire and references were presented in the appendix sections.

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## ABBREVIATIONS AND SYMBOLS

B.Ed.	-	Bachelor of Education
M.Ed.	-	Master of Education
i.e.	-	That is
e.g.	-	exempli gratia (for example)
et al.	-	et alia (and other people)
etc.	-	Etcetera
B.S.	-	Bikram Sambat
Q.	-	Question
S.N.	-	Serial Number
F.M.	-	Full Mark
T.U.	-	Tribhuwan University
M.	-	Male
F.	-	Female
Q.No.	-	Question Number
No.	-	Number
U	-	Upper
L	-	Lower
PWoP	-	Passage without Picture
PWP	-	Passage with Picture
PWDP	-	Passage with Detail Picture
S.D.	-	Standard Deviation
B.P.S.P.R.P.J.H.S.S.	-	Bawani Prasad Sakal Prasad Ram Pradad Janta Higher Secondary School
H.S.S.	-	Higher Secondary School
D.A.V.H.S.S.	-	Dayanand Anglo-Vaidic Higher Higher Secondary School



M.H.S.S.	-	Mangal Higher Secondary School
%	-	Percentage
Dr.	-	Doctor
Mr.	-	Misreter
Mrs.	-	Missis
&	-	And
S.L.C.	-	School Leaving Certificate

## **CHAPTER – ONE**

### **INTRODUCTION**

#### **1.1 General Background**

##### **1.1.1 Paraorthography as a Part of Language and Semiotics**

###### **1.1.1.1 Introduction of Language**

Language is such a powerful medium which not only distinguishes human beings from other living beings but also helps to communicate or express all internal feelings, desire, emotions and information. It is a means of oral-aural, arbitrary, and habitual symbols. It is tremendously complex and extremely profound in communication. Even though it is complex in nature, it can be mastered by every sort of learners in the very short period of time irrespective of culture, caste, geography and other boundaries if it is scientifically represented.

“Linguistics is a part of semiotics” (Tobin, 1990) and language is studied under the linguistics. So language is a part of semiotics which deals with various modalities of communication. They are: visual, which is done by seeing with eyes; aural, which is done by hearing organ (i.e. ear); olfactory, which is done by smelling organ (i.e. nose); gustatory, which is done by tasting organ (i.e. tongue) and tactile, which is done by touching organ (i.e. skin). Besides these, semiotics deals with various signs and signals. (e.g. zoo-semiotics etc).

Among them, oral-aural is the most usable and appropriate means for effective interaction, which comes under a special discipline (i.e. language). Language has mainly two levels namely, productive level and receptive level which consist of mainly two symbols viz. reading symbols

(i.e. graphic substance) and listening symbols (i.e. phonic substance). Under graphic substance, there is not only science of spelling (i.e. writing system) but also the non-writing system which is technically called 'Paraorthography' (i.e. it is beyond the orthography) which comprises the science of signs which include each and every sort of signs, signal, symbols, and even arrows which show the directions very clearly. They are read by an illiterate person also. Moreover, in 'Pashupati Area', only arrows point out the location of the 'Pashupati Temple'. We can use these signs from the economy point of view. For example, it can be illustrated as follows:

**Figure No. 1**

**Figure of a Temple and a Hospital**

Additionally, a figure of skeleton of human body in the context health is also an example of Paraorthographic text.

Evidently, in the Nepalese context, learners have to learn the linguistic concept and information by the help of available graphic substance. Furthermore, reading and writing are especially being emphasized on our entire academic system because of written examination system. That is, learners have to learn language by means of various uses of compositions which are not being correlated with suitable pictorial substance (i.e. text) which makes the information vivid and easily palpable. In other words, they are relevant pictorial representations (i.e. posters, photographs, tables, graphs, maps, charts, diagrams, drawings, penmen, models, puppets, matchsticks and other available visual material etc.) which make the learning task easy and students become enthusiastic and intrinsically motivated to grasp the tough tasks very quickly and easily.

Thus, in our academic programme, the Paraorthography along with graphology (i.e. orthography) must be considered by all concerned persons.

Explicitly speaking, we have observed the value of tourist maps and traffic signs which are interpreted even by a layman.

Today, linguistics has many and diverse subfields which link language to other disciplines or fields of study (Tobin, 1990). Hence the 'Paraorthographic Texts' are very much helpful for the improvement of writing skills as well as all other skills. Considering this fact, the Department of English Language Education, T.U. has designed the separate units on 'Interpreting and using Paraorthographic Texts' in the General and Major English Courses and as the component of writing: 'Orthographic and Paraorthographic texts' of B. Ed. I and III years and M. Ed. II year respectively.

### **1.1.2 Definition of Orthography (i.e. Graphology)**

The term Orthography is used for spelling in general, and for correct or standard spelling in particular. Like the term "spelling" itself, the term "orthography" is more likely to be used for alphabetic writing than of syllabic writing, and is unlikely to be used as ideographic writing. Alphabetic writing system is based on sounds; syllabic is based on syllables; and ideographic is based on words. Hornby (4<sup>th</sup> edition, 1989: 874) defines the word 'orthography' as 'study or system of spelling and correct or conventional spelling.'

Generally speaking, it is the study or science of spelling. Orthographic writing is very much similar to alphabetic writing .It consists of letters which represent speech sounds. Roman script, which is used in English and several other languages, is an example of orthographic writing. In orthographic writing there may not be one- to -one relation between the letters and the sounds they represent. For example, the letter "c" is pronounced as [k]in cat but [s] in fence.

In the field of teaching and learning, only orthographic texts cannot fulfill ultimate purposes. Thus, the use of paraorthography is to be considered as an essential phenomenon. So, having the importance in mind, the researcher is presenting its meaning and versatile use in learning.

### **1.1.3 Meaning and Definition of the Term Paraorthography**

Morphologically, the term 'Paraorthographic' is an adjective which consists of four morphemes, viz. 'Para-', 'ortho-' '-graph' and '-ic'; where 'para-' (i.e. Greek 'para-') is a prefix meaning 'beside', 'past', 'beyond', adjacent to (e.g.parathyroid), distinct from, but

analogous to (e.g. paramilitary and paranormal etc). ‘ortho-’, combining form, which means (a) straight, rectangular, upright (b) right, correct. It is derived from Greek word ‘orthos’ which means ‘straight’. ‘-graph’ is a suffix; it is used to form nouns and verbs and its meaning (1) ‘a thing written or drawn etc’; in a specified way e.g. autograph, photograph (2) an instrument that records e.g. heliograph, seismograph, telegraph etc. and ‘-ic’ is a suffix used with nouns to form adjective.

Subsequently, after adding prefix ‘para-’ with orthography, we form a meaningful word ‘Paraorthography’ which conveys the meaning beyond the orthographic texts and makes an attractive text. It makes the information as living beings, thought provoking, and bewildering arrays of perceptive representation.

With regard to the second objective of the book ‘A Course in General English’ it indicates “to develop in the learners an ability to comprehend and interpret different kinds of written texts as well as different varieties of paraorthographic texts which are parallel to the term non-orthographic languages such as charts, graphs, tables and diagrams”(Sthapit et al. 1994).

“Non-orthographic Language”, according to Kouroupetroglou (1999), “is graphic sets and systems for augmentative and alternative communication. The majority of the non-orthographic languages are sets of line drawings, each with its own distinct and fixed meaning”. Von Tetzchner and Martinsen (1992 in Kouroupetroglou, 1999) demonstrate that “A user of well-established non-orthographic language combines a number of graphic symbols to formulate a sentence”. Kouroupetroglou, in his next paper (2000), writes about non-orthographic text as “non-orthographic language in general, belong to Graphic Representation

System (GRS) since they use standardized graphic symbols (ranging from photographs resembling the depicted object, to abstract linear drawings with no apparent relation to the referred object) as their building elements and to convey communication content”. He also expresses non-orthographic languages do not always use graphic symbols but also sometimes, accompany with written text.

“It took 2,000 years for punctuation and spaces between words to enter written language, so can the continued evolution of how information is packaged, filtered and consumed be doubted? In this exploration of the changing economics of our information-based world, Lanham, professor emeritus of English at UCLA and author of *The Electronic Word*, proposes the problem with the information economy is “information doesn’t seem in short supply. Precisely the opposite. We’re drowning in it.” Lanham posits that as society moves from a world defined by “stuff” to one defined by “fluff”, people are increasingly in need of filters to weed through the information glut. Enter the arts and letters. Citing sources from the art world to Madison Avenue, Lanham delves into the increasing amount of importance placed on a product’s packaging rather than the product itself. Lanham’s points are strong and well-researched, as shown through his “background conversations,” substitutes for endnotes included at the end of every chapter. If style is going to increasingly operate as the decision-making arbiter, Lanham should be commended on his: clear, jargon-free and forward-thinking.

Spaces and punctuations are part of what it is called paraorthography, visual elements that facilitate the orthographic system in written communication. prof. Lanham is right in that paraorthography helps to guide our attention in reading, but it also does more”(Lanham, 2007).

Briefly, the Paraorthographic texts are useful and factual forms for all levels of learners', and producers' written texts; from satisfactory point of views. Specially, the texts are preferred to the school age students.

#### **1.1.4 Exemplification**

Some Examples of Graphs and Diagrams (i.e. Paraorthographic texts) are given below.

After collecting the numerical data for statistical enquiry, the next step is to classify and tabulate them. When their sizes increase, they become confusing and uninteresting such that no one would care to study them. To avoid this difficulty, the best method of presenting numerical data is the use of diagrams and graphs.

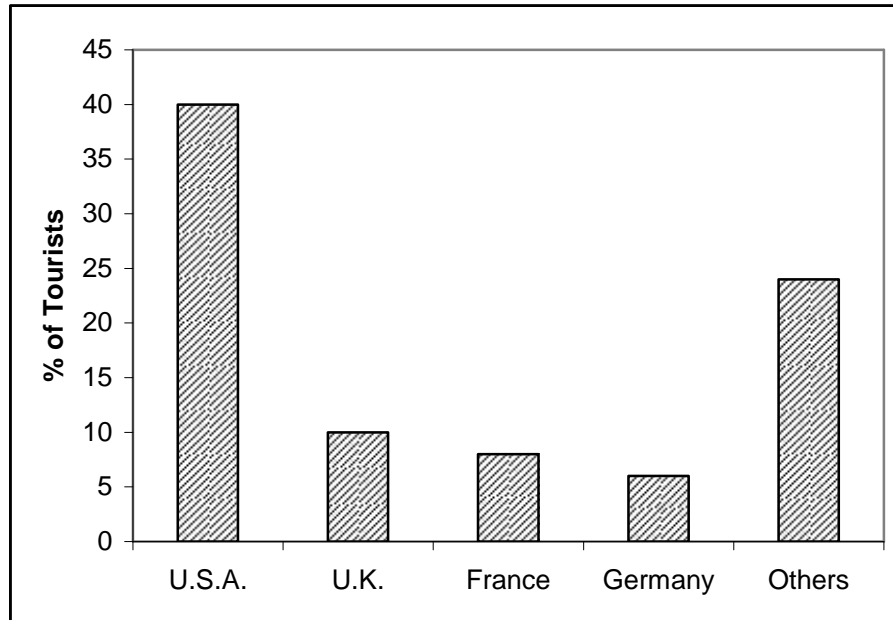
Diagram and graphs are nothing but the presentation of statistical data in the form of geometrical figures like points, lines, bars, rectangles, circles etc.

##### **1.1.4.1 Simple Bar Diagram**

Simple bar diagram is a diagram for only one variable. It is the most simple and useful tool for the comparative study of two or more “values of a single variable”. It consists of a set of equidistant rectangles of equal widths. The heights (or lengths) of the rectangles are represented by the given values of the variable. The number of rectangles is equal to the number of values of the single variable.



**Figure No. 2**  
**Simple Bar Diagram of Percentage of Tourists by Nationality**  
**in 1968**



Such bars, charts and diagrams etc. are given to save time and space and present difficult facts explicitly. By giving such tools for example questions like these may be asked.

- (a) Which nation has the highest number of tourists in Nepal?
- (b) Which country sends the lowest number of tourists to Nepal?
- (c) Compare the tourists of the U.K and the U.S.A. in percent (%) etc.

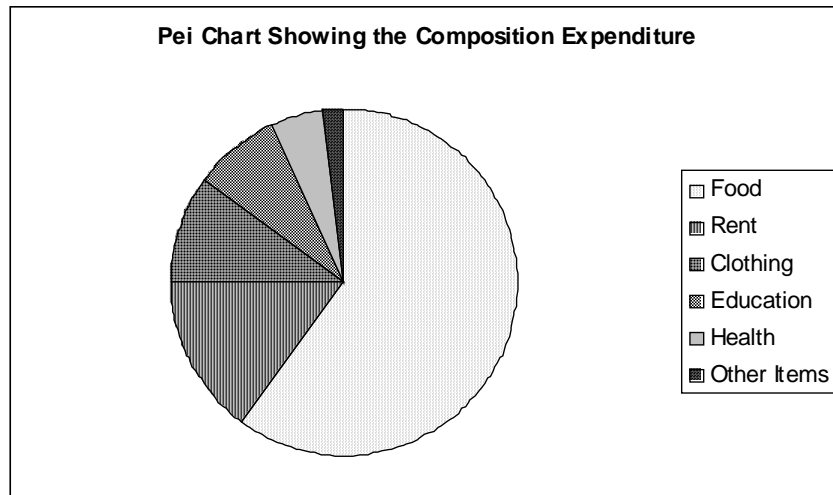
#### **1.1.4.2 Pie-Diagram (Pie-chart)**

Circle diagram is a diagram in the form of a circle whose area represents the total value. The circle diagram dividing into different sectors by such radial lines that the area of each of the sector representing the component value of total value is said to be the Pie-diagram. Pie-diagram is used to show the relation between the components with one another and also to the total. However, in pie-diagram the areas are compared. So, pie-diagram is a two dimensional diagram. It is also

known as Pie-chart or angular diagram.

**Figure NO. 3**

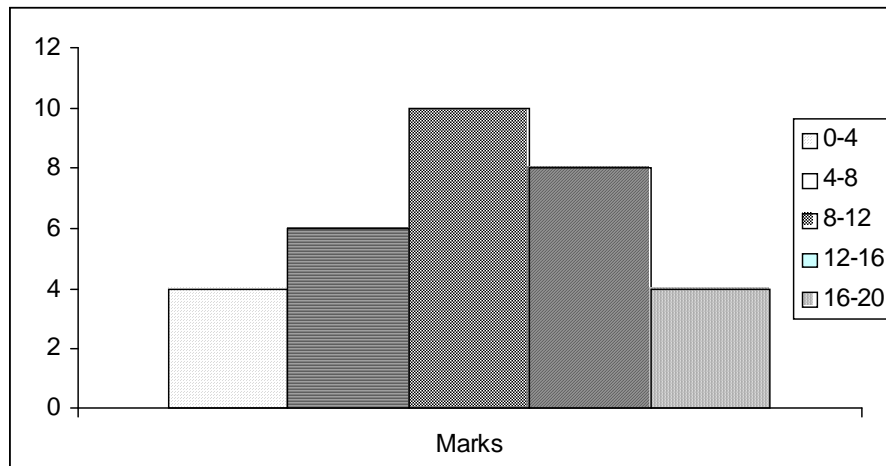
**Pie Chart Showing the Composition Expenditure**



**1.1.4.3 Histogram**

Presentation of frequency distribution in the graphic form is known as “Histogram”. It consists of a set of adjacent vertical rectangles on x-axis with bases equal to the width of the corresponding class intervals and heights proportional to the corresponding frequency of each class so that the area of the rectangle is proportional to the frequency of the corresponding class. Thus in case of equal class-interval, the heights of the rectangles will be proportional to the frequencies while for unequal classes, the heights will be proportional to the relation of the frequencies to the corresponding class-size.

**Figure No. 4**  
**Histogram Showing Marks**



In short, the aforementioned diagram and charts are used as a means not only from the receptive point of views but also from the writing point of view. Because after observing these charts and diagrams, one can write an essay and can explain the fact. That is, they can be helpful for speaking and writing skills (i.e. productive skills) and they can be used from listening and reading point of view (i.e. receptive skills). In other words, these signs, symbols, diagrams, charts and colored pictures have their multidimensional usefulness and effectiveness as they are used from various angles.

Thus, the study concerns with the potential effectiveness of paraorthographic texts in language teaching and learning. The sciences of signs and symbols have considerable importance in semantics and pragmatics (i.e. the relation of signs to interpreters). For example, in 'Meanings into Words' Intermediate, Students Book for grade 'XI and XII'; there are various 'paraorthographic texts' but they not only are irrelevant texts to the Nepalese culture but also have the lack of clarity and explicitness.

Even though the researcher has considered the fact that literary scholars, sociologists and anthropologists constantly accuse their opponents of underestimating or overestimating the achievements of modern linguists, the researcher ventured to reveal the value of paraorthographic texts in the whole educational programmes.

Bearing the values of Paraorthographic texts in mind, the researcher has done the present thesis so as to link its importance with teaching and learning of the English language.

## **1.2 Review of Related Literature**

A set of studies have been carried out to investigate the effectiveness on different fields and facets of language under Department of English Education T.U.

**Acharya** (2001) carried out a research to find out the effectiveness of recorded materials and live materials in teaching listening. It was found that recorded materials are slightly better than the live material in teaching listening.

**Khanal** (1997) studied the effectiveness of Cloze Test over conventional objective test in testing reading comprehension in English. The researcher found out that the private schools' students' performance was better than public schools students' performance in both objective and cloze test. The researcher also concluded that the cloze test is better than the objective test in testing reading comprehension.

**Khakural** (2005) carried out a study to find out the effectiveness of matchstick figures in teaching action verbs at grade five. It was found that matchstick figure technique is effective in teaching action verbs.

**Dhakal** (2000) carried out a research work on "Effectiveness of Discrete Point Test and Integrative Test as Measures of English Language Proficiency". This study compares the two types of test- Discrete point test and Integrative test. The researcher concluded that the score in the seen text was naturally higher than unseen text and girls' performance was better than boys' performance.

**Satyal** (2003) carried out a research to find out the effectiveness of visual aids in teaching English at primary level. It was found that the use of visual aids in teaching English at primary level is fruitful and effective.

**Chapagain** (1999) carried out a study to find out the impact of teaching materials and to suggest their effective use but no finding is drawn from the study.

**Limbu** (2002) carried out a study to find out the effects of animated films on the development of spoken fluency in the young children. It was found that animated films on the development of spoken fluency in the young children are so effective on the development of spoken fluency in the young children.

**Pandey** (2004) carried out a study to find out the effectiveness of language games in teaching grammar. It was found that using them in teaching grammar are relatively more effective than teaching grammar without using.

**Rawal** (2004) carried out a study to find out the effectiveness of drill technique in teaching passivization. It was found that drill technique is effective in teaching passivization

Briefly speaking, my new attempt will be one of the most practical works in the field of pedagogy. Because various fields of linguistic

research have been done in the department of English Education, T.U. but the effectiveness of paraorthographic text is an untouched area up to now. Moreover, nobody paid attention on the measurement of the effectiveness of paraorthographic texts.

### **1.3 Objectives of the Study**

Objectives of the study were given below.

- (a) To find out the effectiveness of Paraorthographic texts in the field of learning.
- (b) To compare and contrast the levels of paraorthographic texts with orthographic texts.
- (c) To point out some pedagogical implications of the findings of the study.

### **1.4 Significance of the Study**

The significance of the study can be shown in the following points:

- (I) It will be very useful source for textbook writers.
- (II) Language teacher will be aided if he will be preconceived with the effectiveness of paraorthographies.
- (III) The learner of language will be attracted to learn everything with the help of paraorthographies.
- (IV) As guidance, it will also be useful for the actors or actresses in dramas/films.
- (V) It will be used by a good leader or orator if he has a short period of time to learn something from the written text and reproduce it on the stage immediately, because a written text is linear, but then, paraorthographic text provides holistic information at a glance.
- (VI) It will be too much useful for memorization point of view, i.e. any tough tasks can be memorized very easily, because our brain

accepts the visual representation.

(VII) It will be a very important means for a good displayer of information or for the advertisement purposes.

(VIII) It will be useful for newspaper editors, visual aid creators and models, puppets or other visual aid projectors.

(IX) It will be used for effective guidance and counseling also.

Briefly, it will help to remedy problems of teaching such texts. Directly and indirectly, this study will be very significant especially for the teachers, the students and the syllabus designers. It will also be very useful for the researcher and the others persons involved in different fields.

## **CHAPTER TWO**

### **METHODOLOGY**

Methodology refers to the systematic study of required steps which are sequenced in the framework to carry out the research. So, to carry out this research work, the researcher used the following methodology:

#### **2.1 Sources of Data**

Both primary and secondary sources were used for collecting data for the present study.

##### **2.1.1 Primary Sources of Data**

The primary sources of data were from the Grade XI students studying in Science, Education and Commerce streams and their responses to the test items. The disciplines and institutions in question were chosen from Government added H.S. Schools or Private H.S. Boarding Schools in Kathmandu, Lalitpur and Saptari districts (i.e. rural or urban areas).

##### **2.1.2 Secondary Sources of Data**

Besides, the primary source, the researcher studied the related books, theses, articles, reports and journals to the research work for the facilitation of the study.

#### **2.2 Population of the Study**

The population of the study consisted of Grade XI students from three different disciplines, institutes and geographical areas. The disciplines included the faculty of Education, Management, and Science.



### 2.3 Sample Population of the Study

It consisted of 60 students attending the above mentioned faculties and schools. The number of students was 20 from each faculty, school and district. The students from each group were selected as representative of different sex groups using stratified random sampling procedure.

### 2.4 Tools for the Data Collection

The test items were used to collect the data for which there were three types of question sets consisting of objective types of questions; objective questions were multiple choices, fill in the blanks and matching tests. Altogether twenty objective questions were prepared for each set. The full marks of the questions were twenty for the objective questions.

**Table No. 1**

**Numbers of Questions and Distribution of Marks**

Question papers	Types of Objective Questions			No. of Questions	Allotted Marks
	Multiple Choice	Fiill in Blank	Matching Test		
1 <sup>st</sup> set Q. (passage without picture henceforth:PWoP)	10	5	5	20	20
2 <sup>nd</sup> set Q. (passage with pictures henceforth:PWP)	10	5	5	20	20
3 <sup>rd</sup> set Q. (passage with detailed pictures henceforth: PWDP)	10	5	5	20	20

All the three sets of questions had the same difficulty level

because all of them included the same description of human beings. All the passages consisted of the same events in sequence. They told them when, where and how the events happened systematically, all passages dealt with simple past tense. And they consisted of the same number of sentences. Description of the questions asked to the students is given below:

**Table No. 2**

**Correlational Presentation of Three Sets of Questions**

<b>Q. set-A</b>	<b>Q. set-B</b>	<b>Q. set-C</b>
- Without picture	- With picture	- With detailed, illustrative and elaborated pictures
-Description of place	- Description of place	-Description of place
- Change in the same places	- Change in the same places	- Change in the same places
- Concrete description	- Concrete description	- Concrete description
- Unseen place	- unseen place	- unseen place
- Tense, words & sentences are the same in this set also	- The same as in previous set	- The same as in previous set
- Description of the same People without any changes except pictures.	- Description of the same People without any changes except pictures.	- Description of the same People without any changes except pictures.

## **2.5 Process of Data Collection**

First of all, the researcher prepared three sets of test items addressing twenty different types of objective questions. The questionnaires included the various types of Paraorthographic texts, viz. only orthographic text was in Q. set-A; some pictures were in Q. set-B and detailed pictures were in Q. set-C; in the questionnaires, only one specimen text from grade XI had been administered.

Having prepared three sets of test items, a pilot study was carried out to determine the duration and appropriateness of the test items. On the basis of the pilot study, the test items were revised, reviewed and improved. After that, the researcher visited the schools where he studied and collected data from the aforementioned disciplines and institutions. He requested the authentic personnel and explicitly described the related objectives of the study. After getting permission, the researcher selected the required number of students using fixed sampling procedures and the selected sample population was taken to a separate room to administer the test (i.e. exam). Other necessary information was provided orally. And, the test was administered in three times (i.e. different test items in each time). After collecting the answer sheets of the first shift exam, the researcher thanked them and left the school; after one month, the second shift exam was administered and the third set question papers also administered in the same time interval; the researcher himself had invigilated and he requested other persons for co-operation. After thanking them for their valuable time, participation and kind co-operation, the researcher left the exam room.

## **2.6 Limitations of the Study**

The study was limited below:

- (a) The proficiency of the sample population in interpreting three different sets of paraorthographic texts was taken care of.
- (b) The respondents were selected from grade XI students of different schools.
- (c) The sample population of 60 students from different disciplines, geographical areas and institutions which were selected from H. S. Schools from Kathmandu, Saptari and Lalitpur districts only.
- (d) There were only objective types of test-items.
- (e) Reading passages and tests items were constrained to paraorthographic texts with orthographic texts.

**CHAPTER – THREE**  
**ANALYSIS AND INTERPRETATION OF DATA**

This chapter deals with the analysis and interpretation of the data which are divided into two sections. The first one deals with the performance of the students in the schools asked in the examination of three schools. The analysis of multiple choice, fill in the blanks and matching test items was done statistically

The researcher analyzed and interpreted the obtained data both descriptively and analytically. And then, he also included appropriate statistical tools like tables.

**3.1 Holistic Comparison**

**Table No. 3**

**3.1.1 Holistic Comparison on the basis of school wise analysis**

School's Name	PWoP			PWP			PWDP		
	No.	Mean	S.D.	No.	Mean	S.D.	No.	Mean	S.D.
D.A.V.H.S.S., Jawalakh- el,Lali-tpur	20	16.30	2.15	20	17.45	1.96	20	19.30	.86
B.P.S.P.R.P.J.H. S.S. Kalyanpur, Saptari	20	13.50	2.91	20	15.05	2.70	20	18.85	1.23
Mangal H.S.S., Kirtipur, Kathmandu	20	13.45	3.38	20	14.75	3.11	20	17.65	3.10
Total	60	14.42	3.11	60	15.75	2.86	60	18.60	2.08

The data recorded in table 3 show that the mean scores of the students of D.A.V.H.S.School in PWoP, PWP and PWDP are 16.30, 17.45 and 19.30 respectively; and those of the standard deviation are 2.15, 1.96 and .86 respectively.

In the case of the students of H.S.School Kalyanpur, the mean scores of PWoP, PWP and PWDP are 13.50, 15.05 and 18.85 respectively; and those of the standard deviation are 2.91, 2.70 and 1.23 respectively.

Likewise, the students of Mangal H.S.School got the mean scores of PWoP, PWP and PWDP 13.45, 14.75 and 17.65 respectively; and those of the standard deviation are 3.38, 3.11 and 3.10 respectively.

The recorded data illustrated the fact that the paraorthography had the dominant effect in learning.

### 3.2 Group Based Comparison

**Table No. 4**

#### 3.2.1 Comparison on the basis of Q. set 1 and Q. set 2

Type of Question sets	No. of Respondents	Mean	SD	t-value	P-value
1.Passage Without Pictures (PWoP)	60	14.42	3.11	-7.73	.000
2.Passage with Pictures (PWP)	60	15.75	2.86		

The data recorded in table 4 show that the mean scores of PWoP and PWP are 14.42 and 15.75 respectively. Therefore, the mean score of

PWP is higher than the mean score of PWP by 1.33. Since the calculated value of "t" is greater than the tabulated value (t.025, 59=1.96). Hence, this difference in means is found significant at 0.05 level. It indicates that there is real difference between the mean achievement of PWP and PWP at 0.05 level.

So the score obtained in PWP is greater than PWP. It can be concluded that effect of paraorthographic text is powerful at receptive level.

**Table No. 5**

**3.2.2 Comparison on the basis of Q. set 2 and Q. set 3**

<b>Type of Question sets</b>	<b>No. of Respondents</b>	<b>Mean</b>	<b>SD</b>	<b>t-value</b>	<b>P-value</b>
2.Passage With Pictures (PWP)	60	15.75	2.86	-9.04	.000
3.Passage with detailed Pictures (PWDP)	60	18.60	2.08		

The data recorded in table 5 show that the mean scores of PWP and PWDP are 15.75 and 18.60 respectively. Therefore, the mean score of PWDP is higher than the mean score of PWP by 2.85. The calculated value of "t" is greater than the tabulated value (t.025, 59=1.96). Hence, this difference in means is found significant at 0.05 level. It indicates that there is difference between the mean achievement of PWP and PWDP at 0.05 level.

So the score obtained in PWDP is greater than PWDP. It can be

concluded that end product of paraorthographic text is influential at receptive level. The students' achievement provided by the passage with detailed pictures is better than that of the passage with pictures.

**Table No. 6**

**3.2.3 Comparison on the basis of Q. set 1 and Q. set 3**

<b>Type of Question sets</b>	<b>No. of Respondents</b>	<b>Mean</b>	<b>SD</b>	<b>t-value</b>	<b>P-value</b>
1. Passage Without Pictures (PWoP)	60	14.42	3.11	-11.75	.000
3. Passage with detailed Pictures (PWDP)	60	18.60	2.08		

The data recorded in table 6 show that the mean scores of PWoP and PWDP are 14.42 and 18.60 respectively. Therefore, the mean score of PWDP is higher than the mean score of PWoP by 4.18. Since the calculated value of "t" is greater than the tabulated value ( $t_{0.025, 59} = 1.96$ ). Hence, this difference in means is found significant at 0.05 level. It indicates that there is difference between the mean achievement of PWoP and PWDP at 0.05 level.

So the score obtained in PWDP is greater than PWoP. It can be concluded that illustrations of paraorthographic texts is prominent at receptive level.



## CHAPTER – FOUR

### FINDINGS AND RECOMMENDATIONS

#### 4.1 Findings

Based on the analysis and interpretation of the data, the findings can be stated as follows:

1. With regards to the objective No.1 that is “to find out the effectiveness of paraorthographic texts in the field of learning”, the study found that the paraorthographic texts were effective in helping students comprehend the texts. In other words, students understand texts better if the text is accompanied by paraorthographies. So the paraorthographic texts are very useful in learning and teaching.
2. With respect to the objective No.2 that is “to compare and contrast the levels of paraorthographic texts with orthographic texts”, it was found that paraorthographic texts were easier for students to attempt in comparison to orthographic texts.

The three sets of the passages (i.e. questions) were graded with the level of paraorthographies and compared with one another in pairs. Comparison between the passage without pictures and the passage with pictures (i.e. Q. set-A and Q. set-B), it was found that the presence of pictures in the passage assisted the students in their better performance and in securing better marks; and comparison between PWoP and PWP; PWoP and PWDP; and PWP and PWDP, it was found that the effectiveness of PWDP in comprehending the passage was the most valuable in getting information than that of PWoP and PWP. So, the PWDP has been noted the most valuable one in getting information.

Thus, among PWoP, PWP and PWDP, the last one illustrated the most effectiveness of paraorthography at receptive level.

Hence, orthography which does not impart clear and concrete pictures, photos, figures etc. remains incomplete without the help of paraorthography.

## **4.2 Recommendations and Pedagogical Implications**

On the basis of the findings derived from the study, the researcher has made the following recommendations:

1. The students should be exposed to paraorthographies from different sources and angles.
2. The difficult passages, language activities, categories and items should be modified and arranged with paraorthographies psychologically.
3. Teachers should use the different types of paraorthographies to make teaching effective.
4. The students should be given tasks based on illustrated pictures, diagrams etc.
5. The blurred insertion of paraorthography in the Text- Books should be either omitted or improved.
6. Teaching items should be furnished with paraorthographies.
7. The teachers should be skilled in teaching through pictorial representation in teaching languages; they should necessarily have sound pictorial representation in mind.

8. The Text- Book writers should always bear in mind the effectiveness of paraorthographies.
9. News Papers, magazines, written materials, etc. should contain paraorthographies for their sweetness and distinctness.
10. It is true that by watching a flying plane, no one can be a pilot; so the importance of required paraorthographies should be implemented in practice.
11. Workshops, Seminars, Short-term Meetings and Gatherings of Language Teachers should be organized time-to-time for the discussions of paraorthographies.
12. All the concerned sectors should have their sensitive attention on the apt use of paraorthography.
13. 'A figure is worth of ten thousand words' that is, a figure of a dog can convey thousands of the meanings irrespective of mother tongue of the students; that is, it is indisputably better than the word 'dog'.

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## APPENDICES

### APPENDIX – 1

#### List of the Students Involved in the Study

**D.A.V. Higher Secondary School Jawalakhel, Lalitapur, Nepal.**

S.N.	Name	Sex	Age
1.	Biascoa Mitra Raj Giri	Male	17
2.	Abishkar	Male	18
3.	Priyanka Singh	Female	20
4.	Milan Bhurtel	Male	21
5.	Prashmsha Simkhada	Male	17
6.	Sabina Parajuli	Female	18
7.	Sabi Pokharel	Female	19
8.	Raja Ram Mahta	Male	17
9.	Manisha Thapa	Female	19
10.	Niramala Prajuli	Female	17
11.	Neelesh Rauniyar	Male	18
12.	Divya Aryal	Male	17
13.	Sanjeev Banjara	Male	19
14.	Mohana Matanguly	Male	17
15.	Bikram Phuyel	Male	19
16.	Anup Singh	Male	17
17.	Jenish Jha	Male	18
18.	Pratik Jha	Female	19
19.	Kripal Sreshtha	Male	21
20.	Ramesh K.C.	Male	20



## APPENDIX – 2

### Shree Bawani Prasad Sakal Prasad Ram Prasad Janta Higher Secondary School Kalyanpur -6, Saptari

S.N.	Name	Sex	Age
1	Ashok Kumar Chaudhary	Male	18
2	Bibek Mandal	Male	22
3	Jivan Kumar Sah	Male	17
4	Sunita Thakur	Female	19
5	Nagendra Prasad Chaudhry	Male	20
6	Krishna Ram	Male	17
7	Manoj K. Yadav	Male	18
8	Sonu Kumari Sah	Female	21
9	Raju Chaudhary	Male	20
10	Shova Kumari Sah	Female	17
11	Priya Kumari Ram	Female	18
12	Jitendra Thapa	Male	20
13	Amita Kumari Mandal	Female	21
14	Kiran Shardar	Female	20
15	Binod Sah	Male	18
16	Sita Sah	Female	19
17	Roshana Kumari Mandal	Female	20
18	Ajay Sah	Male	17
19	Dipika Chaudhary	Female	16
20	Rita Yadav	Female	18

### APPENDIX – 3

#### Mangal Higher Secondary School Kirtipur, Kathamandu Nepal.

S.N.	Name	Sex	Age
1.	Kamal Dabadi	Male	20
2.	Akash Shahi	Male	19
3.	Durga Pande	Male	18
4.	Susila Giri	Female	17
5.	Nagendra Shahi	Male	17
6.	Devaki Giri	Female	18
7.	Pramila Tamang	Female	16
8.	Anju Thapa	Female	20
9.	Ramesha Panth	Male	21
10.	Sanju Shreshtha	Female	17
11.	Bhawana Panth	Male	18
12.	Prasen Bista	Male	20
13.	Renu Thapa	Female	18
14.	Rajesh Maharjan	Male	21
15.	Bipin Acharya	Male	17
16.	Subina Putwar	Female	18
17.	Niru Khanal	Female	17
18.	Pramoda Thapa	Male	20
19.	Milan Shreshth	Male	18
20.	Raju thapa	Male	17

## APPENDIX – 4

**Output Table Obtained by Using SPSS in Comparing Means (Report)**

school's name		Passage without pictures	Passage with pictures	Passage with details pictures
D.A.V. H.S. School	Mean	16.30	17.45	19.30
	No.	20	20	20
	Std. Deviation	2.155	1.959	.865
Mangal H.S. School	Mean	13.45	14.75	17.65
	No.	20	20	20
	Std. Deviation	3.379	3.110	3.100
H.S. School Kalyanpur	Mean	13.50	15.05	18.85
	No.	20	20	20
	Std. Deviation	2.911	2.704	1.226
Total	Mean	14.42	15.75	18.60
	No.	60	60	60
	Std. Deviation	3.115	2.862	2.077

## APPENDIX – 5

### Pair Comparison

#### (Paired Samples Test)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Passage without pictures - Passage with pictures	1.333	1.336	.172	1.678	-.988	-7.730	59	.000
Pair 2	Passage without pictures - Passage with detailed pictures	4.183	2.759	.356	4.896	3.471	11.747	59	.000
Pair 3	Passage with pictures - Passage with detailed pictures	2.850	2.441	.315	3.481	2.219	-9.043	59	.000

## APPENDIX – 6

### School Wise Mean and Std. Deviation (Altogether) (Report)

Total marks of the students

Schools' Name	Mean	No.	Std. Deviation
DAV H.S. School	53.05	20	4.273
Mangal H.S. School	45.85	20	8.647
H.S. School Kalyanpur	47.40	20	5.995
Total	48.77	60	7.160

## APPENDIX – 7

(List of the Students and their Marks Involved in the Study)

**D.A.V. Higher Secondary School Jawalakhel, Lalitapur, Nepal.**

S.N.	Students' Name	Q. Set- A	Q. Set- B	Q. Set- C
1.	Biascoa Mitra Raj Giri	16	18	20
2.	Abishkar	15	17	19
3.	Priyanka Singh	19	19	19
4.	Milan Bhurtel	17	18	20
5.	Prashmsha Simkhada	15	17	18
6.	Sabina Parajuli	17	18	19
7.	Sabi Pokharel	18	19	17
8.	Raja Ram Mahta	13	15	20
9.	Manisha Thapa	12	13	19
10.	Niramala Prajuli	13	14	18
11.	Neelesh Rauniyar	19	19	20
12.	Divya Aryal	14	14	20
13.	Sanjeev Banjara	19	20	20
14.	Mohana Matanguly	18	19	20
15.	Bikram Phuyel	17	18	19
16.	Anup Singh	19	19	20
17.	Jenish Jha	17	18	20
18.	Pratik Jha	15	17	19
19.	Kripal Sreshtha	16	19	20
20.	Ramesh K.C.	17	18	19

## APPENDIX – 8

(List of the Students and their Marks Involved in the Study)

Shree Bawani Prasad Sakal Prasad Ram Prasad Janta Higher

Secondary School Kalyanpur -6, Saptari, Nepal.

S.N.	Students' Name	Q. Set- A	Q. Set- B	Q. Set -C
1	Ashok Kumar Chaudhary	12	14	15
2	Bibek Mandal	16	17	19
3	Jivan Kumar Sah	13	13	19
4	Sunita Thakur	14	18	19
5	Nagendra Prasad Chaudhry	18	19	20
6	Krishna Ram	15	15	20
7	Manoj K. Yadav	15	16	19
8	Sonu Kumari Sah	14	15	20
9	Raju Chaudhary	12	17	19
10	Shova Kumari Sah	15	16	18
11	Priya Kumari Ram	16	16	19
12	Jitendra Thapa	11	11	18
13	Amita Kumari Mandal	7	9	17
14	Kiran Shardar	11	13	19
15	Binod Sah	12	13	18
16	Sita Sah	9	11	19
17	Roshana Kumari Mandal	11	18	20
18	Ajay Sah	17	17	20
19	Dipika Chaudhary	18	18	19
20	Rita Yadav	14	15	20

## APPENDIX – 9

(List of the Students and their Marks Involved in the Study)

Mangal Higher Secondary School Kirtipur, Kathamandu Nepal.

S.N.	Students' Name	Q. Set- A	Q. Set- B	Q. Set -C
1.	Kamal Dabadi	17	18	20
2.	Akash Shahi	11	11	19
3.	Durga Pande	19	19	19
4.	Susila Giri	14	13	17
5.	Nagendra Shahi	17	17	15
6.	Devaki Giri	14	16	20
7.	Pramila Tamang	15	16	19
8.	Anju Thapa	10	12	14
9.	Ramesha Panth	12	13	19
10.	Sanju Shreshtha	8	9	7
11.	Bhawana Panth	11	13	17
12.	Prasen Bista	8	10	15
13.	Renu Thapa	17	18	19
14.	Rajesh Maharjan	15	19	20
15.	Bipin Acharya	17	18	20
16.	Subina Putwar	8	11	17
17.	Niru Khanal	12	14	19
18.	Pramoda Thapa	13	15	20
19.	Milan Shreshth	14	16	18
20.	Raju thapa	17	17	19