Abstract of the Thesis

A STUDY OF ERRORS IN ENGLISH IN RELATION TO COGNITIVE STYLE AND CEREBRAL DOMINANCE

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Abstract

**Importance of English Language**

The importance of English language lies in the fact that it is the most preferred language of Science, Technology, Information, Literature, Commerce, Trade, International Politics and Relations, International Communication and what not. This has made English the key to all progress- national or individual.

**Status of English in Punjab**

But, a distressingly vast majority of the students of Punjab is highly incompetent in English language. Even though they study it for around nine years, English language is the principal reason for their failure at class X. They don’t know the commonest structures and commit serious errors in its use.

**Errors**

An error is a way of saying a thing which is markedly different from the native established way of saying it. It either gives imperfect or no meaning than intended. Although reduction of errors is the aim of all learners and teachers of language, errors are inevitable.

**Causes of Errors**

The factors causing or contributing towards errors in use of language are neither limited in number, nor fully understood. These could be broadly classified as:

(a) Pertaining to the process of acquiring or learning language.
(b) Related to teaching environment and experiences and
(c) Associated with the Personal variables of the learner

The factors about the learner himself, like his age, intelligence, aptitude, attitude, strategies, locale, gender, etc, are the most numerous, the most prominent and the commonest causative factors. Major among other, less researched factors, could be listed the **Cognitive Styles and Hemisphericity** of the learner.

**Cognitive Styles**

Cognitive styles are the manner in which an individual acquires and processes information. They have significant influence on the way and quality of intellectual functioning of the individual and, therefore, are important factors in his learning. Though
a wide range of ‘styles’ has been discovered, the polar construct of field dependence (FD) and field independence (FI), is the most recognized and researched style.

People who are less influenced by the surrounding or background field and can easily extract an element are called field independent; those who can’t, field dependent. Although both styles are important for successful learning of a language, the Field Independent learners, on account of being more analytical, focused and detail-loving, are better suited for the ‘classroom’ learning.

**Hemisphericity**

Brain hemisphericity or Cerebral Dominance is the tendency of an individual to process information through the left hemisphere or the right hemisphere or in combination.

Although, both hemispheres are needed for a proper use and learning of language, the left-brained learners being analytical thinkers, make good linguists and have a distinct edge over their Right Brain or Whole Brain dominant counterparts.

In addition to the above, factors like locale, gender and caste are also closely associated with the linguistic achievement of a learner.

Hence, it was decided to include these factors as variables of the present investigation and to study the extent of their influence in the errors in English language in use of which the students of Punjab dismayingly poor.

**Significance of the Study**

The results and conclusions of the present study can be fruitfully employed by the curriculum framers, the text book writers, the school subject teachers, the teachers at teacher training programs and parents to lessen the incidence of errors by the government school students of Punjab.

**Statement of the Problem**

A STUDY OF ERRORS IN ENGLISH IN RELATION TO COGNITIVE STYLE AND CEREBRAL DOMINANCE
Objectives of the Study

The study was undertaken to achieve the following objectives:

1. **To study the errors** committed by students of grade XI in written English work in vocabulary, spelling, punctuation, functional grammar and translation.
2. To study the **patterns of errors** committed by learners in relations to locale (urban, rural), gender (male, female) and caste (SC and Non-SC).
3. To study the **differences in errors in relation to cognitive styles**: Field dependence and Field independence.
4. To study the **differences in errors in relation to hemisphericity**: Left, Right and Whole Brain.
5. To collect **opinions on the possible causes of errors** by the sample from experts and practicing teachers.
6. To make **recommendations** emerging out of the problem under investigation.

Hypotheses

The following Hypotheses were developed and tested:

1. **Large numbers of errors of various types are committed by students.**
2. (a) The **patterns of errors** will not differ in relation to locale.
   (b) The patterns of errors will differ in relation to gender.
   (c) The patterns of errors will not differ in relation to caste.
3. The patterns of errors of students with different **cognitive styles** will differ significantly.
4. The patterns of errors of students with different **hemisphericities (cerebral dominance)** will differ significantly.

Delimitation of the Study

The study was limited to 400 grade XI students of PSEB affiliated Government schools of three districts of Punjab namely, Amritsar, Hoshiarpur and Sangrur. It was further delimited to errors in written English in the areas of Translation, Punctuation, Spelling, Vocabulary and (Functional) Grammar.

The Sample and the Sampling Technique
The sample comprised of 400 students of grade XI from Government run secondary schools. Only those students were selected who spoke Punjabi as Mother tongue and whose medium of instruction had always been Punjabi.

The sample was drawn from 19 schools randomly selected from the three again randomly selected districts of Punjab - Amritsar, Hoshiarpur and Sangrur. Of these 6 schools were urban and 13 schools were rural.

The sample was raised/ collected using the Proportionate to Population Size (PPS) sampling technique.

As such, the various sub groups, in relation to one another, were in the following ratios:

Males and female students in equal numbers; rural and urban students in 70:30 and SC and Non-SC students in 28:72 ratio

**Design of the Study**

Survey Research Method was made use of for the purpose of the present investigation.

**Description of the Tools**

The following Standardized and Self-constructed tools were used to collect data:

1. The Group Embedded Figures Test (GEFT) developed by Herman A. Witkin, Philip K. Oltman, Evelyn Raskin and Stephen A. Karp.
2. The Indian version of the SOLAT (Style of Learning and Thinking) test developed by Dr. D. Venkataraman in 1994.
3. The Test of Errors in Written English (Self Constructed)
4. Questionnaire for Teachers and Experts
5. Personal Data Sheets

**Procedure**

For collecting data on Errors in written English by the XI grade urban, rural, male, female, SC, Non-SC, FD, FI, Left, Right and Whole Brain dominant students of Punjab, the investigator got a list of rural and urban boys’, girls’ and co-educational secondary
and senior secondary schools from the DPI (Secondary) Schools, Punjab. Nineteen schools were selected out of which thirteen were rural and six were urban.

The selected schools, both rural and urban, were visited by the investigator. Before the administration of the tests, the purpose of investigation was briefly explained and the respondents were encouraged to give correct answers and were assured that the results would be kept confidential and used purely for the purposes of this investigation. After these and other preliminaries, data were collected from all the suitable subjects available in all the visited schools.

The environment, procedures and testing situations were kept as similar as possible to have true and correct information.

The filled in response-sheets / test-booklets collected from each subject were tagged and grouped in their respective categories for scoring. The scoring of the responses was done strictly according to the instructions and directions provided in test-manuals.

The data so collected were recorded in tabular form for statistical analysis according to the objectives of the investigation and for drawing conclusions. The SPSS was used for computations and statistical treatment of the data of various types.

**Statistical Treatment of the Data**

The data were subjected to the following Descriptive and Inferential Statistical Analyses:

In descriptive statistics, summary statistics viz. Distribution of Frequencies, Mean, Median, SD, Skewness and Kurtosis were worked out to check normality of data.

Means and SD’s of errors of each of the five areas viz. areas of vocabulary, spelling, punctuation, functional grammar and translation were calculated separately also for all the eleven groups of subjects to work out the Numbers and Percentages of students making a large number of errors in total or in a particular type or area of errors.

The Means of Errors by the various groups were compared to study the patterns of errors and ranks of hierarchy.

t-tests were used to find out the statistical significance of the differences between group means for all the variables separately. The significant differences were also studied between the groups.
To determine the significance of differences among means of errors in different areas by the students of different hemisphericities concurrently, the inferential statistical technique of One Way Analysis of Variance (F test) was employed. Where the F score was statistically significant, a series of Tukey's HSD test was used to determine which means were significantly different from which other means.

The opinions of Experts and Serving Teachers on Causes of Errors were subjected to Percentage Analysis and the Recommendations for their maximum reduction were inferred upon and, placed under relevant headings, tabulated and reported at the appropriate places.

**Major Findings of the Study**

The major findings of the study along with the vital statistics are given below under different headings:

**Large Number of Errors in English**

- High percentages of all groups of students make large numbers of errors of different types in English.

**Errors in English in relation to Locale**

- High numbers (or percentages) of both Urban and Rural students make large numbers of errors in English.
- Urban and Rural students differ significantly in their Errors in English.
- The Rural students make significantly more errors in their use of English language than the Urban students.

**Errors in English in relation to Gender**

- Fairly high percentages of both Male and Female students make large numbers of errors in English.
- Male and Female students differ significantly in their Errors in English.
- The Male students make more errors in their use of English language than the Female students.

**Errors in English in relation to Caste**

- Very high percentages of both SC and Non-SC students make large numbers of errors in English.
- SC and Non-SC (General) students differ significantly in their Errors in English.
• SC students make more errors in their use of English language than Non-SC (General) students.

**Errors in English in relation to Cognitive Style**

• High percentages of both Fi and FD students make large numbers of errors in English.
• Field Dependent and Field Independent students differ significantly in their Errors in English.
• **Field Dependent students make more errors** in their use of English language than the Field Independent students.

**Errors in English in relation to Hemisphericity**

• High percentages of **Left, Right and Whole Brain dominant students** make large numbers of errors in English.
• Students with different Hemisphericities (Cerebral Dominance) differ significantly in their Errors in English.
• Left Brain and Right Brain Dominant students differ significantly in their Errors in English.
• **Right Brain dominant students make more errors** in their use of English language than the Left Brain Dominant students.
• Left Brain and Whole Brain Dominant students differ significantly in only some areas of Errors in English.
• **Whole Brain Dominant students make more errors** in their use of English language than the Left Brain dominant students.
• Right Brain and Whole Brain Dominant students differ significantly in only some areas of Errors in English.
• **Right Brain Dominant students make more errors** in their use of English language than the Whole Brain Dominant students.

**Patterns of Errors in English:**

**The Highest Ranking Types of Errors**

• The Hierarchy of the Highest to Lowest Type of Error across all groups is: Spelling, Grammar, Translation, Vocabulary and Punctuation.

**Differences in Ranks**
• The Mean scores of errors in the first, second and third ranking Types of Errors (Spelling; Grammar; Translation) are quite close to one another.

• The Mean scores of the groups of the Right Brain Dominant students and the Field Dependent students were the closest and of the Urban and SC groups, the farthest in all Types of Errors.

**Range of Mean Scores in different Errors**

• The Mean values of Errors of different Types fall between 6.02 and 13.30 out of a possible 20 maximum marks.

**The Highest Ranking Error Groups**

• The Schedule Caste (SC) students make the highest number of errors.

• The groups of the Males, the Whole Brain, the FD and the Rural students make the five highest error-making groups and come second only to the SC students.

• The groups of Non-SC, Females, FI, Left Brain and Urban students make the least number of errors of all types in English.

• Urban students make the least number of errors in English.

**Causes of Errors**

1. Lack of Clarity on Aims and other important Issues
2. Faulty Recruitment Policies
3. Overuse of Grammar-Translation method
4. Foundation of English not laid properly in Elementary Schools
5. Irrelevant and Faulty Text-Books
6. Recently introduced Semester System not implemented properly
7. Continuous Comprehensive Evaluation not implemented extensively
8. Syllabus not defined in terms of Behavioral Objectives, doesn’t suggest ways and means to achieve them
9. Pre- and In-Service trainings not adequate
10. Dearth of Social Learning Methods and Communicational Techniques
11. Policy allowing passing Matric without English
12. English Not taught as Skill Subject
13. Lack of Motivation and Perseverance among students
14. Failure of Current schemes (like the Mid-Day Meal Scheme)
15. Reluctance among teachers to adapt their teaching to different recommendations
16. Uninspiring Physical Environment in the English Classroom
17. Disuse of Instructional Aids
18. Inadequate amount of time in Time-Table
19. Importance to Literature, not Language
20. Disregard for Correction Work
21. Adverse effects of the new changes in Curriculum and Examination System

Verification of the Hypotheses:
The hypotheses have been verified as under:

Hypothesis 1 stating “Large numbers of errors of various types are committed by students” stands accepted.

Hypothesis 2 (a) stating that, “The patterns of errors will not differ in relation to locale” stands partially accepted.

Hypothesis 2 (b) stating that, “The patterns of errors will differ in relation to gender” stands partially accepted.

Hypothesis 2 (c) stating that, “The patterns of errors will not differ in relation to caste” stands partially accepted.

Hypothesis 3 stating that, “The patterns of errors of students with different cognitive styles will differ significantly” stands partially accepted.

Hypothesis 4 stating that, “The patterns of errors of students with different Hemisphericities (Cerebral Dominance) will differ significantly” stands partially accepted.

Recommendations:
Major among the General recommendations to improve the overall standard of English in Punjab are:

- Adoption of a clearer policy on Education of English
- Recruitment of more skillful teachers and provisions for their continuous professional development
- Use of Eclectic, more Flexible, Psychological, Learner-centered methods
- Use of Discourse-based methods and Approaches
- More reliance on Teaching Aids
- More Focused and Skills-based Examination
- More attention to Correction Work
- Adoption of Strategies to suit the express needs of special groups like the SC, the FD and the Right Brain Dominant students.