Error Analysis of ESL Learners: An Indian Perspective

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Abstract

The study examines the errors committed by second language learners in their writing. It also traces the effect of Error Analysis (EA) teaching techniques on ESL students’ writing skill. A total of 100 undergraduate students of the Bridge Course at Aligarh Muslim University were the subject of the study. Firstly, a pretest was conducted at the semester beginning where students were asked to write a composition. These write-ups were analyzed and results were saved. In the next stage, students were given multiple activities based on grammar and writing for around 3 months as a treatment. The main focus of the treatment was to look into the specific errors collected in the pretest. After completing the treatment, a posttest was performed to assess any change in type and frequency of errors. Errors of both tests categorized mainly into four types: omission, addition, misformation and misordering. These errors are further analyzed by adopting the notions of Coder’s Error Analysis and Surface Strategy Taxonomy as theoretical frameworks. Moreover, a comparison of pretest and posttest results shows significant reduction in the frequency of errors in posttest denoted that treatment had positive effects on the performance of students. Hence, it is expected that through this study, ESL teachers will be more familiar with the most common errors made by students. They will investigate the causes of errors and recommend appropriate solutions. This study will also assist teachers to make more objective decisions about adopting relevant content and teaching strategies to help ESL students learn better.

Keywords: Error analysis, Surface structure taxonomy, Writing composition, Pretest, Remedial classes, Posttest

1. Introduction

Writing has never been easy, even in one’s mother tongue. Unsurprisingly, it gets significantly more complex and time-consuming when one learns a foreign language (Allen and Corder, 1974). ESL learners struggling to write well have long been a concern in ESL countries. As Nunan (1999) asserts, it is evident that ESL learners at the beginning strive to write in the target language, the one dissimilar from their first language. The task is even more challenging when these learners are expected to compose well-developed and seemingly effortless writing. Writing is the most challenging language skill to master as compared to reading, listening, and speaking since it requires a high level of language control, problem-solving form, generating ideas, planning, goal setting, monitoring, and assessing what has been produced (Al-Ghabra and Najim, 2019). Several factors including L1 interference and linguistic incompetence predominantly in the concepts of grammar make it difficult for the learners to write satisfactorily. A good composition should have particular structure,

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It has been observed that second language learners are always hesitant to write in English out of apprehension of failure. They frequently commit mistakes in writing even after learning fundamental language abilities. It is often the case with those who have memorized a considerable amount of English vocabulary and grammar rules but have never actually used them (Wachs, 1993). In this situation, the role of a teacher has become more challenging to motivate second language learners to understand the importance of good composition and to put enough effort into enhancing their writing skill (Chaudhary and Al Zahrani 2020). Apart from motivation, feedback is of utmost importance in the writing process. Improvement cannot happen without individual attention and constructive feedback on errors. Indeed, L2 students need explicit teacher feedback on content, writing form, and structure. Students will be disadvantaged in improving their writing skills if proper feedback is not part of the teaching process (Myles, 2002). Hence, it is crucial that teachers first examine students’ prior knowledge of writing abilities to implement an effective teaching technique to guide and help students practice to reduce common errors. This study is based on the idea that effective writing skill can be achieved by identifying the most prominent errors and analyzing their causes.

1.1. Error Analysis

According to Crystal (1999) “EA is the study of the unacceptable forms produced by someone learning a language, especially a foreign language”. Richards and Schmidt (2002) define error analysis as the study and scrutiny of the errors committed by second language learners. It is vital to note here that errors are not the same as mistakes. According to Corder (1981), errors deal with deviances induced by a lack of competence while mistakes are defined as the performance of errors deemed insignificant. Errors are the outcome of learners’ transitional competency, whereas mistakes result from an external factor to the speaker’s competence. Error analysis has significant relevance in the field of language teaching and learning. It alerts learners about the types of common errors they regularly make in their writing. Language teachers will instantly comprehend their students’ errors, which will enable them in developing instructional strategies to improve students’ English competence (Abushihab, 2014). On the whole one can safely aver that error analysis is a tool kit for the overall improvement of the learner—Especially during occasions when the learner is face-to-face in actual situations and when his linguistic competence is called into action.

In conducting error analysis research, there are five systematic steps which are commonly practiced by researchers and teachers (Corder, 1967). The first step is collecting samples from learners. Once done, the errors in the samples are identified and then classified. The next step is explanation/description of errors. Lastly, the researchers or teachers assess the severity of the errors by looking into the sources that caused them to happen. According to Vásquez and Alberto (2008), there are two possible reasons EFL/ESL learners make errors. The first reason is mother tongue interference, which causes “inter-lingual errors” (Richards, 1971). These errors occur when a student attempts to translate a statement or portion of a sentence directly into the target language without considering how a native speaker would ordinarily write it. The other type of errors are “intra-lingual errors” induced by lack of knowledge about the target language’s rules, such as faulty generalization, incomplete application of rules, and failure to learn parameters under which rules apply (Richards, 1971). Identifying learners’ recurring errors is really important because this critical evaluation will indicate how much they have learned (Brown, 2000; Corder, 1967; Ringbom, 1987). Therefore, EA can be considered a fundamental tool in language teaching and learning to reorganize a teacher’s perspective and readdress their methodology for bridging and fulfilling the gap in students’ knowledge (Londono Vasquez, 2007).

1.2. Types of Errors

There are four types of errors based on surface structure taxonomy: omission, addition, misformation, and misordering. According to Dulay et al. (1982), surface structure taxonomy focuses on how the surface structure changes.

1.2.1. Omission

Omission error can be defined as the absence of an item which must be present in a well-formed utterance. It works on the principle that the inexperienced learner is liable to construct a grammatically incorrect sentence by leaving out grammatical morphemes like nouns, verbs, prepositions, etc. Following are the examples of omission error:

   Petrik speak French well. This sentence needs inflection -s

   I not play yesterday. This sentence needs an auxiliary did
1.2.2. Addition

Addition error is defined as the presence of an item which must not be present in a well-formed statement and this includes three sub-types – Double markings, regularization and simple addition. Following are the examples of addition error:

- \textit{I swim(s) every day.}  \textendash; \textit{s} is not required in this sentence
- \textit{We discuss (about) our assignment.}  \textendash; The word about is not needed here.

1.2.3. Misformation

This type of error occurs when learners use an incorrect form of certain morpheme or structure. It happens when one word is replaced with another similar word. Examples are given below:

- \textit{They go to Delhi last week.}  Instead of:  \textit{They went to Delhi last week.}
- \textit{I has all the required stuffs with me.}  Instead of:  \textit{I have all the required stuffs with me.}

1.2.4. Misordering

Misordering is defined as the wrong placement of certain morphemes. Examples are given below:

- \textit{John drove yesterday a BMW.}  Instead of:  \textit{John drove a BMW yesterday.}
- \textit{What your sister is doing?}  Instead of:  \textit{What is your sister doing?}

2. Literature Review

Ever since Pit Corder initiated the idea in 1960 of error analysis, there have been legion of research studies conducted on error analysis by well known linguists. The aim is to focus on and identify the areas in which EFL students err while writing the second language. The issue of EA has been very effectively highlighted by Corder (1974). And the beneficiaries include not only the teachers and syllabus designers but also textbook writers who get to know the problem areas as far as language learning is concerned. According to some researchers (Coder, 1967; Dai and Shu, 1994), EA is extremely important for second language acquisition in the following ways: teachers can understand students’ current level of learning, researchers can understand how language is learned and structured, and students can use these errors as a learning device to improve their language proficiency. To educators and researchers, errors occur naturally in language learning (Edge, 1989; Hendrickson, 1987). Errors and mistakes provide essential feedback, inform the teachers about the effectiveness of teaching material and techniques, and talk about what the learners have learnt and taught. They help to decide the following teaching and learning steps and plans including the revision of previous lessons, starting new assignments and selecting different syllabi or course contents (Amjad et al., 2021). Error analysis is also significant as a mechanism for improving writing skills. Various studies, including Kroll and Schafer’s (1978), demonstrate how EA can improve writing skills.

There is no denying the fact that any and everyone who is into ESL/EFL learning has to encounter difficulties whilst being engaged in this exercise. This is absolutely commonplace and their recurrence is something which is obvious. There are hardly any exceptions but with practice and consistency these errors may be avoided. The immediate task before the researchers and teachers is to identify the kinds of errors being committed by the students as well as also to focus on the frequency of the same and provide the necessary solution. The reasons for the occurrence of the errors are also looked into in several studies; it helps the students become more aware of their problems and ultimately become improved learners. The previous studies imply that EA plays an important role in language teaching and learning processes. It must be practiced on a regular basis in order to improve students’ linguistic skills. The researchers conducted the current study to find the frequency and types of errors that occurred in English writing tasks by ESL/EFL students. Besides, this study examines the sources of errors and seeks to enhance students’ awareness and understanding of the errors they commit.

3. Objectives

Identify the type and frequency of errors ESL students make in their writing.
- Identify the sources of errors ESL students make in their writing.
- Investigate the effect of remedial strategy on the writing skills of ESL learners.
4. Methodology

This section reviews the research methodology used for the present experiment and includes the details on participants, instruments, and procedures.

4.1. Participants

A total of 100 undergraduate students from two classes of the Bridge Course at Aligarh Muslim University were selected to participate in the research through convenience sampling as they were easily accessible by the researchers throughout the study. These students had their primary education at Madarsas (Islamic religious institutions), where Urdu was the medium of instruction, but English was taught as one of their subjects within the curriculum. The students’ age ranged between 17 and 21.

4.2. Research Instrument

A pretest, a posttest and a semi-structured interview were used to collect data. A total of one hundred compositions were collected for evaluation. These compositions were analyzed by adopting the notions of Coder’s Error Analysis and Surface Structure Taxonomy as a theoretical framework. The qualitative and quantitative methods were applied to analyses the learners’ tests results. A quantitative approach was used to determine trends, frequency, and errors, and qualitative methods were employed to examine the in-depth knowledge of sources of errors.

4.3. Research Procedure

In the present study, the procedure comprised of four different stages. In the first stage, a pre-test was conducted at the beginning of the semester where students were asked to write a composition of 250 words on the topic “A memorable day in your life”. All the compositions were collected and errors in these compositions were analyzed and results were saved. Secondly, students were given remedial classes during the intervention period of about three months as treatment in response to errors collected in the pretest. The focus of these remedial classes was to look into specific errors collected in the pretest. This treatment was accomplished by using language worksheets and multiple exercises based on grammar and writing. Also in each session causes and solutions of errors were discussed. In the third stage, a post test was conducted to see if learners’ frequency of errors reduced and writing skill had improved after attending remedial classes. Finally, a comparison of pretest and posttest results was made to see the impact of remedial classes (Table 1).

5. Results and Discussion

The data show a wide range of errors made by ESL students in nouns, pronouns, verbs, adjectives, adverbs, articles, determiners, prepositions, and conjunctions, which are classified mainly into four categories: omission, addition, misformation, and misordering (Table 1).

<table>
<thead>
<tr>
<th>Table 1: Number of Errors Made by the Students in the Pretest and Posttest</th>
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<tr>
<td>Types of Errors</td>
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<td>Omission</td>
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<td>Addition</td>
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<td>Misformation</td>
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<td>Misordering</td>
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<td>Total</td>
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In Figure 1, the X shows the number of participants who took part in the study, whereas Y represents number of errors committed by learners in both pre and post-test. The graph shows reduced omission errors committed by participants before and after the training session. As shown in the figure, most students have achieved more significant number of omission errors (431) in the pre-test. Out of 100 students, 08 students have committed 07 errors each, 17 committed 06 errors each, 22 students committed 05 errors each, 15 students committed 04 errors each, 31 students committed 03 errors each, 04 students committed 02 errors each, 02 students have committed 01 error each and 01 student did not commit any mistake in pre-test.
We can see a significant reduction in the omission errors (62) during the post-test scenario. As one can see, out of 100 students, 56 students did not commit any error in the post-test. However, 26 students committed just 01 error each and 18 students committed 02 errors each. The most common error type found in the participants’ write-ups was the omission. Errors of omission could happen because the learners still lack the form or grammar that is supposed to have in the sentence, but the learners omit it (Kusumawardhani, 2017). Omissions were frequently made by students who were still learning (Dulay et al., 1982). Similarly, the current research revealed that omissions were very common (431), indicating that the students were in their early stages of learning. However, these errors were significantly restricted after rigorous training of the participants on the error analysis technique for about three months. The data shows that the two most common errors were omission and addition types, respectively.

After collecting and analyzing the data of pre-test, the authors found a total of 1313 errors made by the students in writing composition. The omission error (431) was the most dominant of all these errors. It was followed by addition (347) and misformation (312), whilst misordering (223) was found the least. From the error analysis, it has been observed that Indian EFL learners are primarily prone to commit omission errors. This finding is linear to the Sharma (2021) study, indicating that omission errors are learners’ most frequently committed errors. Also, you can notice the significant difference between the pre-test and post-test results. The overall errors got significantly reduced (198) in the post-test.

Addition was the second most common type of error in students’ writing. But a marked improvement was observed in students’ performance, in the pre-test analysis (347) errors whereas only (49) errors were noticed in the post-test. As one can see in Figure 02 that out of 100 students during the pre-test scenario 04 students have committed 06 errors each, 13 students have committed 05 errors each, 35 students have committed 04 errors each, 25 students have committed 03 errors each, 21 students have committed 02 errors each followed by 01 error committed by 01 student. Only 01 student did not commit any error during the pre-test scenario.

On the contrary, out of 100 students, 61 students did not commit any error in the post-test. However, 30 students committed just one error each, 08 students committed 02 errors each, and only 01 student committed 03 errors in the post scenario. Errors, in addition, are made when essential elements such as main verbs, articles, prepositions, and punctuations are added. Students overuse words because it is believed that they have a limited vocabulary and understanding of grammar, which leads to errors in this category. As in the case of omission error, a similar trend is being followed here.

Figure 3 indicates an apparent statistical difference between the results of errors before and after the intervention. The data reveals that during the pre-test scenario, 07 students have committed 05 errors each, 30 students have...
Figure 2: Trend Analysis of Participant’s Addition Error Before (Green) and After (Red) the Training Session

Figure 3: Trend Analysis of Participant’s Misformation Errors Before (Green) and After (Red) the Training Session
committed 04 errors each, 36 students have committed 03 errors each, 23 students have committed 02 errors each, 03 students have committed 01 error each and 1 student made no error at all. However, during the post-test scenario, only 02 students made two errors each, 44 students made one error each, and 54 students committed no errors at all. The pre-test had more errors (312 errors), but the post-test had (48 errors) indicated that students had improved themselves as a result of training. These are intra-lingual errors. These errors result from a lack of understanding of how to create sentences in the appropriate tense.

Figure 4: Trend Analysis of Participant’s Misordering Error Before (Green) and After (Red) the Training Session

Misorderings are the least frequent type of errors in students’ writing according to the surface strategy taxonomy. The number of errors was higher in the pre-test (223), students improved themselves in the post-test and committed (39) errors all together. Figure 4 indicates an apparent statistical difference between the results of errors before and after the intervention. As one can see 07 students have committed 04 errors each, 36 students have committed 03 errors each, 36 students have committed 02 errors each, 15 students have committed 01 error each and 06 students did not commit any error during the pre-test scenario.

The data reveals that only 01 student has committed 03 errors, 04 students achieved 02, and 28 students committed 01 error each. However, 67 students did not commit any mistakes in the post-test scenario. It suggests that only few students have problem with this type of surface structure taxonomy errors.

Misordering errors are made by low-achieving learners who rely mainly on their L1, the fact that they were the least frequent type of error supports the previous assertion that the students were not complete beginners. Gass and Selinker (2008) stated that “beginning learners rely on their L1 processing strategies” in support of this.

A marked improvement was observed in the posttest, see figure 05. The numbers of errors were more significant in the pretest (1313) in comparison to the posttest (198), suggesting that students’ achievement has significantly improved because of using the intervention (error analysis technique). These results prove to be a big difference in the learners’ knowledge, understanding and performance. They were able to perform better in the posttest. Hence, it demonstrates the effectiveness of error analysis techniques in enhancing writing skills. This study’s results are very similar to Amjad et al. (2021) study, indicating that practicing error analysis teaching techniques enhances writing skills. This study has
also observed significant variation between the pretest and posttest. Practicing the error analysis technique helped students understand the true nature of common errors and mistakes and enabled them to perform better in different areas of grammar and writing skills.

Phuket and Othman (2015) stress that the errors made by the learners can inform the teachers of their language learning progress. Hence, there is a need for teachers or instructors to pay attention to the most severe problems because solving the serious ones will accelerate students’ progress in language learning. However, the identification of language errors will be inadequate if no treatment is provided to support students writing performance. Thus, class instructions should be reinforced with supplementary writing practices (Javed et al., 2013) to expose students to various types of writings in which students can apply their ESL knowledge in the writing exercises.

Principal Component Analysis (PCA) was performed for each studied error variable. The scree plot analysis revealed that the first two dimensions (principal components) suffice explanation for the total variance. Therefore, the remaining components were overlooked in further PCA plots. We observed significant differences among each treatment-induced effect during the PCA scatter plot (Figure 6). Scatter plot of PCA shows the correlation among each treatment group. The considerable demarcation of clusters suggests a significant ($\alpha = 0.05$) difference among intervention-induced modulations. Ellipses represent a confidence level of 95%. The intervention-induced improvement in students’ performance held the highest explained variance with both PC1 and PC2. The same intervention also rendered minimized error frequencies in the present study. Further, the PCA variable plot shows significant correlations among variables of both treatment groups (Figure 7). Variable correlation plot was arranged for the interconnection among all the variables from both test groups. Positively correlated variables are clubbed together while the negatively related variables are in the opposite quadrants. Thus, close proximities of the parameters (error types) exhibit a positive correlation among them. The distance between the variable and its origin point is directly proportional to the variables’ quality on the factor map. Moreover, we analyzed how closely error types were related to each other throughout the test groups. The correlation matrix chart displayed a high correlation ($R^2=0.85$) among various modules of errors during the pretest and posttest (Figure 8). The strongest correlation was observed between omission and addition ($R^2=0.85$), while the least correlation was found between misordering and the remaining errors.
Figure 6: PCA Scatter Plot for the Pretest and Posttest Results. Ellipses Exhibit 95% Statistical Confidence Between Both Tests

Figure 7: Variable Plot Explaining Intense Relation Among Studied Variables
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Each variable is distributed on the chart diagonal. The bottom of the diagonal corresponds to the bivariate scatter plot with a fitted line between any two variables. Further, each box in the diagonal top consists of the correlation values between any two variables along with significance levels. Significance levels are denoted by asterisks following $p$-values ($p=0.01$), * ($p=0.05$), ** ($p=0.01$), *** ($p=0.001$).

6. Conclusion

Writing is an intricate process, even in the native language. Indeed, it is more complicated to write in a foreign language. However, it can be learnt and improved through consistent practice (Sharma, 2021). Practice will undoubtedly improve the writing, just as in this study, remedial classes positively impact ESL students’ writing abilities. We can notice a significant variation in test I and II results. The number of errors was reduced to a great extent and learners outperformed in test II. Since making errors is a necessary part of learning a language, teachers should remember that student errors are a great way to enhance teaching and learning. Teachers should instruct students on how to avoid the most common errors. In particular, teachers should commend students’ efforts and encourage them to write for purposes other than expressing themselves verbally in different contexts. After revising student writing, teachers should provide regular positive feedback and motivation. Students should practice English grammatical rules and apply them appropriately in various contexts. Each linguistic feature should be explicitly taught in the classroom, along with specific learning activities for different grammatical items. Error Analysis (EA) is beneficial in learning second languages, according to Corder (1974), because it highlights the areas that need improvement for textbook authors, syllabus designers, and teachers. We must concentrate on how to facilitate this learning process for L2 learners and achieve the desired outcomes. We do not assert that mother tongue inference is the sole cause of errors. There may be some other causes like language mixing, L2 literary skill levels, social factors, and individual variances are all possible causes of errors that impact second language learning (Kellerman, 1983; Ringbom, 1987; Odlin, 1989; Gass and Schachter, 2008). In this study the main reasons learners committed errors were intra-lingual transfer and mother tongue interference. Majority of students lacked an adequate knowledge of the English language and did not adhere to its principles. They were used to make overgeneralizations. However, in English, overgeneralization in word formation, usage of auxiliary verbs, adverbs, and pronunciation often fail in numerous ways. Further, since Urdu and English have different grammar and usage
conventions, students cannot assimilate these conventions due to a lack of clarity and inadequate writing practice. The study concluded that errors are an integrated part of language learning process. But with the right approach and effective pedagogical techniques, these deficiencies can surely be rectified by making students practice grammatical rules, asking students to self-correct their composition, and using strategies such as peer evaluation and teacher feedback to make them more aware of errors. It is anticipated that significant proficiency can be expected if teachers have a better knowledge of their students’ writing difficulties and teach them with effective instructional strategies that skillfully integrate reading, writing, vocabulary, and grammar.

Authors Contributions
FA: Conceptualization, data collection, data analysis, and writing: original draft JSA: Reviewing and editing. Both the authors have read and agreed to the published version of the manuscript.

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