Abstract — The present study reports an investigation of English spelling errors by the students of native Hindi speakers. The study was conducted on grade five students of an English medium school of India. Students with similar socio-economic background, studying in the same school were given various tasks to test their English spelling skills. The errors were grouped into five categories. It was noticed that most of the wrong spellings were phonologically similar to the correct spelling. The students wrote what they heard. They knew the alphabets of English and related these alphabets to some sounds. This seems to be the influence of L1 (Hindi) where there is one to one correspondence between sound and orthographic symbol. But it is not so in English. Moreover many English words have silent alphabets in their spellings which also created problem for the students. Lack of knowledge of correct pronunciation of English words added to the spelling errors. This study is important because as far as my knowledge, no such study on the effect of Hindi on the English spelling errors have been done earlier.

Index Terms — Second language learning, Spelling errors, Error analysis, English spelling, Homophones, Orthographical representation

I. INTRODUCTION

The study and analysis of spelling errors help to identify the strategies that the students use in writing spellings. Such information can help overcome some common difficulties faced by students which result in faulty grapheme. The present paper looks on the errors committed by the primary school students of India (New Delhi) in orthographical representation of English spellings. English is the second language (L2) for these students. Hindi is their first language (L1). There is a trial to look into the errors and classify them and find out their possible reasons. Though there are many studies done on ESL but till now as per my knowledge, no work has been done on spelling errors in English by Hindi speakers learning English as L2.

In most schools of India it is compulsory to learn English as a subject. At primary level the students are taught to write simple English sentences. It is important to know the spellings of the words to write correct English. Moreover as Ehri (2000) marks that, learning to spell is important as it is connected with learning to read. To write correct spellings the students require knowing not only the sound-symbol connection but also the various rules with exceptions. There are various rules like plural of a word can be made by adding ‘s’, ‘es’ or ‘ies’ depending on the word ending alphabet. These features of English makes English spelling learning a difficult task, specially so for non-native speakers who are not accustomed with the language and its pronunciation. These difficulties lead to various spelling errors.

There can be various reasons for faulty graphemes; ignorance of spelling rules, transfer of the L1 spelling system, mispronunciation, overgeneralization, and unfamiliarity with English pronunciation. Errors attributed to ignorance of the English spelling rules are those in which orthographic and morphological rules are ignored. It is common to find errors where word ending with ‘y’ is also made plural by adding ‘s’. Another common error refers to overgeneralization where students add unnecessary letters to spellings influenced by other similar spellings. Students may double a single consonant or add a silent vowel at the end of a word. An error due to unfamiliarity with English pronunciation is a common cause for English spelling errors for English as second language learners. They tend to write what they speak and being a non-native speaker they do not always speak the correct pronunciation. Moreover, in English the sound and the letter do not correspond always. English language has about 40 units of sound with only 26 letters used to represent them (Treiman, 1993). Hindi speakers find this very disturbing as most of the Hindi spellings correspond with their sounds. Hindi is written in Devanagari script which is based on phonetic principles. The alphabets represent the sounds they symbolize. So, the Hindi speakers have a tendency to write what they hear. This rule applies well with Hindi spellings but not with English spellings and thus leads to spelling errors.

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The present study groups the spelling errors of the students into five basic categories having sub-divisions. Some of the basic reasons found for the errors were absence of one to one mapping of grapheme and phoneme in English alphabets, presence of silent alphabets and overgeneralization.

II. BACKGROUND

The error analysis supplanted Contrastive Analysis and became a recognized part of Applied Linguistics owing to the work of Corder (1967). In Error Analysis, the error has been defined as a deviation from the norm of the target language and a distinction has been made between errors and mistakes. The error is what takes place when the deviation arises as a result of lack of knowledge whereas the mistake comes up when learners fail to perform their competence. In (1957) Lado hypothesized that errors in the second language are caused by the interference of the student's native language. Others like Odlin (1989) and James (1980) pointed out that students’ errors in L2 are caused by several processes. These include transfer and overgeneralization. Transfer refers to the effect of L1 on the learning of L2. In transfer, patterns from L1 are borrowed as an example; Sun-Alperin et al (2008) observed that young native Spanish students’ English spelling errors were influenced by their Spanish orthography. In Overgeneralization, patterns may be extended from L2 by analogy. Overgeneralization is a process common in both L1 and L2 learning in which the student extends the use of a grammatical rule of linguistic item beyond its accepted uses, generally by making words or structures follow a more regular pattern.

Several studies were done to investigate the spelling errors by ESL. Many of them focus on English learning by Spanish children (Zutell & Allen 1988; Fashola, et al 1996; Ferroli & Shanahan 1993; Sun-Alperin et al 2008). The effect of L1 in L2 spelling errors was studied vastly (Ferroli 1993; Ogorodnikova 1992 and Odisho 1994) and some of the common conclusions were that most of the spelling errors in L2 can be accounted for by interference from the transfer of phonological knowledge from L1.

Spelling errors in English tend to be a direct result of the phonology of English. It has many symbols with more than one sound. This factor makes English difficult for learners of English as a second language learner. Some of the studies (Arab-Moghaddam & Senechal, 2001; Davis, Carlisle & Beeman, 1999; Liow & Lau, 2006) have shown that the orthographic depth and the similarities of the languages involved affect the ESL. “Orthographic depth is determined by the degree of correspondence between sounds and the letters that represent them. Deep orthographies such as English or French, in which sound-symbol correspondence is inconsistent, would be harder to learn than more shallow orthographies, such as Spanish or German in which the correspondence is more consistent” (Joy 2011, p.106). Phonology plays an important role in spelling writing. Many studies (Bruck & Treiman, 1990; Treiman, 1993; Vellutino, Fletcher, Snowling & Scanlon, 2004) show the correspondence of phonology and the orthography. It was seen that students use their phonological knowledge to assist in their spelling of words (Varnhagen, 1995; Fashola et al., 1996; Geva,Yaghoub-Zadeh & Schuster, 2000). It was also seen that many beginning spellers use a letter-name strategy (“b” for “bee”) to spell a word (Read, 1971; Treiman & Bourassa, 2000). Moreover, it was also seen that words that have unstressed syllables, such as the second syllable in the word ‘interest’, are often deleted. In this case, the word is spelled ‘intrest’ by new learners of English.

Treiman (1993) found a number of other common errors among beginning spellers. Some common errors those were found in ESL were omission of a letter (naive=naiv), addition of a letter (dog=dogh), reversals of the letter order of a word (naive= niave), incorrect use of the final “e” and other final letters (gift=gifte) and the substitution of correct letter in a word with incorrect letter (race=rase). Some researchers (Read, 1971; Treiman, 1985; Varnhagen, Boechler, & Steffler, 1999) have observed that students encounter most difficulty with vowels and separating consonants blends into their constituents.

III. METHODOLOGY

A. Participants

The present research is a cross sectional study of 16 children; 7 boys and 9 girls. They were aged 10 to 11 years old and were students of grade five, studying in an English medium school of New Delhi, India. For all the students Hindi was the L1 and English L2. They belong to similar socio-economic background living inside the JNU campus or nearby. Everyone’s mother was a house-maker and father worked in JNU as non-teaching staff. The parents of these children had no knowledge of English. The children used Hindi in their home. These children learnt English only in their school. They got exposure of English only in the school.

These children were learning English from class one. At this level (in class five), according to the school syllabus, they were expected to write full grammatical sentences in English. They were also expected to write small essays on various topics. They were made to read small stories in English and answer the questions regarding the stories in English.

B. Instruments

The students’ second language (English) spelling skills were tested using the dictation method. Dictation involved spelling dictation and paragraph dictation from
class-V, English Reader (the course book of English¹). A word was read thrice and the students were asked to write it in the blank sheet they were given. Some of the paragraphs from the same book were also read aloud and the students were asked to write them.

The questionnaire method was also adopted. The questionnaire had questions asking days of week, names of month, singular-plural, fill in the blanks and essay writing on various topics like ‘My favourite teacher’, ‘Grandparent’s day’, ‘Diwali’ (India festival) etc.

C. Procedures

There was 1 hour sitting for 4 days with the students. After the data collection, number of errors was counted. Then the errors were classified into 6 groups. The percentage of errors of each group was also taken for inter-group comparison. A comparison of errors made by boys and girls was also done. All the words written individually by the boys and the girls were counted. Errors committed by the boys and the girls were taken individually and the percentage of the same were also taken for comparing the errors committed by the each sex.

IV. RESULTS

Both the major error categories and the subcategories were derived from the data collected. The errors are classified in the following five categories. These categories further have sub-divisions. These errors were counted for all the categories under which they were entitled to come (Table 1). The number of overall wrong spellings is 122 but after categorizing them the number becomes 131 as in 9 spellings more than one type of error were found.

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of Errors</th>
<th>Percentage of Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Consonant doubling: Failure to double Unnecessary doubling</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>Other consonant Single letter replacement Silent letter omitted</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>Errors of Silent ‘e’ Omission Adding and replacing</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>Other vowel</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>Homophones</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Others</td>
<td>2</td>
</tr>
</tbody>
</table>

¹ Marigold, Book Five, Textbook in English for Class V (NCERT).

A. Category 1: Consonant-Doubling Error

The two major consonant-doubling errors were included in this category. A common error found in all the students was regarding the doubling of consonants. Sometimes the consonants were not doubled where it should be doubled. In some places there was unnecessary doubling of the consonants. So this section has been divided into two sub-groups; Failure to double and Unnecessary doubling. The total percent of errors of this category is 17.

1) Failure to double
Some of the examples for failure to double are giraffe (giraff), naretate (narrate), bote (bottle), psassenger (passenger), disapointed (disappointed), scholl (school) and metting (meeting).

2) Unnecessary doubling
Unnecessary doubling can be found in many places. Examples- Barber (barber), salesman (salesman), deaf (deaf) and truthfull (truthful).

B. Category 2: Other Consonant Errors

Since this category contained all consonant errors, the number of errors is more than the other groups. There are 37 percent errors in this group. In this category errors are found where consonant letters are either replaced, omitted or clusters are retained. The errors are categorized in the following two groups.

1) Letter replaced
There are instances where single letter has been replaced by other letters. Examples- incident (incident), plazant (pleasant), passenzer (passenger), gracher (creature), naber (neighbour), wishal (whistle), hump-back (humb-backed), thosless (toothless), risite (recite) and hump (humb).

2) Letter omitted
The numbers of omission of silent letters were very common resulting to spelling error. Examples- kindom (kingdom), whistle (whistle), feo (fellow), barbe (barber), listen (listen), flok (flock), desend (descend), neihbour (neighbour) and pesent (pleasant).

C. Category 3: Errors Involving "Silent <e>"

This category contains the errors concerning the letter ‘e’ which is 14%. The category is specially made for ‘e’, because many errors were seen which were due to the letter ‘e’ as many of the English words have silent ‘e’ which are often left out or put in a wrong place by the second language learners of English. Following are the subcategories.
1) a) Omission of silent <e>

The omission category was split in two sub-categories.

i) Omission of an affix

Examples: turnd (turned), askd (asked), crid (cried) and excitd (excited).

ii) Non-affix omission

Examples: stok (stroke), becaus (because), gees (geese), blong (belong), whisl (whistle) and dangrous (dangerous).

2) b) Adding and Replacing of <e>

In this category there are spellings where ‘e’ was wrongly added or it has been replaced by some other letter. Examples: streat (street), cride (cried), onec (once), sepread (spread), vere (very) and speach (speech).

D. Category 4: Other Vowel Errors

This category contains all vowel errors except that of ‘e’. The percent of which is 24. In this category those words are kept in which vowel letters are replaced by other letter, missed out or added unnecessarily. Examples: plesent (pleasant), dangrous (dangerous), stud (stood), nater (nature), def (def), dyameter (diameter), aney (any), leafi (leafy), spread (spread), creater (creature), goad (God) and peass (piece).

E. Category 5: Homophones

Although all the items in this category represented correctly spelled English words but they are spelling errors as the spelling used differs from that of the target word. This type of errors can’t be checked in spelling dictations. These errors came into light when the subjects were told to write essay and when they were given paragraph dictations. The percent of such errors are 6. Examples: had (head), save (shave), there (their), met (made), peace (piece), self (save), by (buy), no (know) and down (dawn).

F. Category 6: Others

In this category, 2% of such words are kept which were hard to categorize. These words have unique errors. Some of the words are: pasinazer (passenger), in this word there are so many errors like failing of doubling the letter ‘s’, wrong vowel letter used and wrong replacement of the consonant. Other words are ‘gracher’ (creature), ‘iagrafı’ (geography) and ‘gtcflı’ (geography).

V. DISCUSSION

As there are more consonants than vowels in English alphabets so it was natural to find the maximum number of errors in the Other Consonant category. But the interesting result was that the errors found in the Other Vowel category were quite high. There are only five vowel alphabets but the number of errors found in this category was second to the number of errors found in the Other Consonant category. Moreover the Other Vowel category does not include the Silent ‘e’ category which is also a part of vowel error. If the categories, Other Vowel and Silent ‘e’ category are put together the numbers of errors caused due to vowels are quite large. But the total number of vowel-errors does not surpass the total number of consonant–errors. It is so because the consonant-errors include both the categories; Other Consonant category and the Consonant Doubling category.

It is interesting to note that vowels errors are so high in number though the vowel alphabets are only five in number. But it can be understood why it is so. The five vowel alphabets stand for more than five sounds. Though there are many conflicts about the English vowel sounds (see Deterding 2004) but the widely accepted number of vowel sounds in Standard English is taken as 20 by others including popular pronouncing dictionaries (Jones, et al., 2003; Wells, 2000). It is difficult for Hindi native speakers to remember the correct use of the vowel alphabet as by the pronunciation they cannot predict the use of the correct alphabet.

Hindi spelling is mainly phonetic and there is a close relationship between phonemes and graphemes. In Standard Hindi there are ten vowel sounds and each of the ten sounds have one corresponding symbol. So, there is one to one correspondence between the sound and its orthographical representation. It is easy in Hindi to predict the spelling of a word by hearing its pronunciation. The Hindi native speakers have a tendency to predict the spelling of a word by just hearing it. They write what they hear. So the error like ‘onec’ (once) where the student writes ‘one + e’ to spell ‘once’ can be found. This rule applies well with Hindi spellings but not with English spellings. This is a major cause of spelling errors in English by Hindi native speakers. This causes errors related to both vowels and consonants. In English one symbol represents more than one sound and one sound can be represented by more than one symbol. This again becomes a point of confusion for the learners of English. This led to errors like leafi (leafy), vere (very). Symbols like ‘y’ ‘i’ and ‘e’ can be used for the sound /i/. ‘S’ and ‘c’ can be used sometimes for the same sound so there was error like risite (recite).

Moreover, in English spelling many words are found where some letters are silent like ‘r’ and ‘e’ at the end of a word. This again becomes a very difficult task for L2 English learner to remember. So, the errors like barbe (barber) where the silent ‘r’ is dropped, lisen (listen) where the silent ‘l’ is dropped and becaus (because) where the silent ‘e’ is dropped can be found.

Some students were ignorant of the English spelling rules. Like, some were ignorant of the past tense affix – ed. In such instances they dropped the “e” and just used “d”, instead of “-ed”, e.g. askd (asked), crid (cried) and...
excited (excited). Students spelled some words by analogy. For example they added a silent (e) at the end of a word that is not spelled with a final ‘e’. In the word ‘truthful’ the students predicted the spelling by using analogy where they added ‘truth’ + ‘full’ = truthful. They doubled the consonant in words that are spelled with a single consonant. The student’s inability to hear or identify all the phonemes in the words they hear seems to be crucial in their spelling ability. This is probably related to a student's proficiency level in English. Lack of exposure to the language seems to be the underlying source of this problem.

Another most important factor that effected student's spelling error rate was unfamiliarity with the English words. This may be attributed to the lack of the correct semantic, phonological and orthographic associations between the spoken sounds and the printed symbols. In the essay writing the students were seen to make errors of homophones. This points out towards the fact that the students were not familiar with the forms and their meanings. When phonetically two words are same but their forms and meanings are different then it becomes a difficult task for the student to remember which form relates to a particular semantics. Due to this errors were found where the students wrote ‘there’ instead of ‘their’ or ‘were’ instead of ‘where’.

Moreover the sound system of Hindi is different from that of English so the students at times neither can pronounce the word correctly nor can spell it correctly because they spell what they pronounce. In Hindi some consonant clusters cannot come in the word beginning position so the native Hindi speakers cannot hear such sound combination and so cannot write them. This finding is consistent with findings of other prior studies in the spelling errors. Results of a study by St.Pierre (1995) revealed the tendency of grade three to employ French orthography to spell English words, a tendency that decreases as words become familiar. By grade eight, this tendency diminished but remained evident for certain phonemes.

A comparison between the errors made by boys and girls were also studied. It was observed that out of all the words written by girls 3% of it was misspelled. In the case of boys it was seen that out of the total number of words written by boys total 5% of words had spelling errors in them. But there is no significant difference. It does not point out towards any specific conclusion. So, in this case it was seen that the sex does not affect the spellings errors when both sexes are under same environment.

VI. CONCLUSION

Non-native speakers of English have lots of trouble with vowel graphemes. This is not surprising to anyone who has considered the symbol-sound correspondence patterns of the English language, where the grapheme/phoneme ratio for consonants has been calculated as 6.0, while that for vowels is 12.7 (i.e., there are, on average, almost 12 ways of spelling each vowel sound) (Dewey, 1970).

If we look in details at the individual error categories, some other interesting trends can be picked out from the results. For example, a close look at some of the data indicates that certain sounds or letters caused more problems than others. Of the 44 items in Category 2 where a single consonant was replaced by another consonant, half involved confusions between letter pairs in the group z, s, c, k, q and another third involved the voiced/unvoiced pairs <p/b, t/d, k/g>. Thus, most of the errors involved letters that spell sounds that are related to articulation. The data also point towards some strategies that the students may have been using. A principle of economy seems to have been used in Category 1, where more double-consonant errors involved omission than unnecessary addition (the number of failure of doubling is 11 while unnecessary doubling is 6) and in Category 3, where the most frequent silent <e> error was omitted. In Category 4, the letter most frequently used erroneously to spell schwa was <e>; this shows a misperception on the students’ part of the frequency of spellings for schwa, since <e> and <a> are actually about equal in English as representations of schwa. The sound /a/ contributed many fewer errors than might have been expected from its frequency in the language. The students appear to have correctly recognized the fact that /æ/ has one of the most consistent spellings in English, being represented almost exclusively by one symbol, i.e., <a>.

One thing is worth noticing that is most of the errors were phonologically similar to the correct spelling. That is to say that the students wrote what they heard. They know the alphabets of English and relate these alphabets to some sounds which are not totally wrong but there is not always one to one correspondence between the alphabets and the sounds which the learners are yet to know. Practice makes that sense so a person who is well learnt in English can easily write the correct spelling of a word which he or she has never heard before.

This study was performed on a very small number of students still it seems important because no such study on Hindi speaking children learning English has been done. This study provides some important reasons for the spelling errors found in L1 Hindi speakers learning English. By looking at these errors it can be said that a learner's errors provide evidence of the system of the language that he or she is using. They are significant in three different ways. First to the teacher, in that they tell him/her, if he/she undertakes a systematic analysis, how far towards the goal the learner has progressed. Second, they provide the researchers with evidence of how language is learned or acquired. Thirdly they are indispensable to the learner himself because he can regard the making of error as a device used in order to
learn. This study can be further developed by increasing the number of subjects and also by introducing the study of development of spelling skills of L1 Hindi speakers learning English as L2.

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